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REVIEW OF 4,152 BIOPSIES OF THE CERVIX WITH RELATION TO CARCINOMA IN SITU

Jacob Hoffman, M.D., David M. Farell, M.D.
and
George A. Hahn, M.D., Philadelphia

The desirability of detecting malignant lesions of the cervix at the earliest possible stage of their development has long been recognized. The search for some means of attaining this end is becoming more intense each day. In recent years, use of an improved colposcope and cytological study of vaginal and cervical smears have been added to the diagnostician's armamentarium, but histological examination of excised cervical tissue still remains the most reliable diagnostic aid at our disposal.

Before 1912, it was generally agreed that squamous cell carcinoma of the cervix can be recognized with certainty under the microscope only when unmistakable evidence of invasion is clearly discernible. In 1912, Schottländer and Kermauner [1] published their findings in a series of frank, invasive carcinomas of the cervix. They pointed out that the cervical epithelium at the margin of such growths shows atypical changes that might well represent the cellular modifications characteristic of the earliest stage in the malignant transformation of the squamous epithelium. In these marginal areas, there was no breakthrough into the subjacent stroma, the atypical cells being, as they described it, still "in situ," that is, still within the epithelium, their site of origin. This work, which has since been elaborated on by Hinselmann,[2] Schiller,[3] and others,[4] is responsible for the belief, currently shared by an ever-increasing group, that it is possible to diagnose squamous cell carcinoma of the cervix with certainty before the malignant cells have broken through from their original intraepithelial position. This initial stage has been variously designated carcinoma in situ, intraepithelial carcinoma, superficial carcinomatous layer, noninvasive potential carcinoma, preinvasive or noninvasive carcinoma, and Bowen's disease of the cervix.

Despite the restraining warnings of more conservative pathologists, the hope of detecting cervical carcinoma before invasion has given rise to a growing literature presenting what appears to be a most impressive array of evidence favoring the "in situ" viewpoint. Wide use of the vaginal smear has greatly increased the reported total of in situ carcinomas, bolstering the optimism of those eager for a means of catching cervical malignant disease early.

The question arises of whether this optimism is justified. Perhaps Lubarsch [5] was closer to the truth when he stated: "I well know that gynecologists demand more and believe more is possible, and I do not doubt that, in a small percentage of the cases, carcinoma can be detected with some degree of certainty from as yet noninvading portions of the neoplasm; but this is a matter of intuition." In the vast majority of cases, however, he maintained that, even with the finest histological methods available, cervical carcinoma could not be diagnosed in the absence of invasion.

Several decades have passed, and the controversy continues. One might well ask why a problem that is apparently so simple should take so long to resolve. Certainly no one objects to pushing forward the point at which cervical carcinoma can be detected and treated effectively; moreover, the histological picture of "in situ carcinoma," as variously described, would seem to be fairly clear-cut. Why then does the matter remain unsettled?

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From the Department of Obstetrics and Gynecology, Division of Gynecology, and the Department of Pathology, Jefferson Medical College and Hospital.
Because of space limitations, the tables and some of the bibliographic references have been omitted from THE JOURNAL and will appear in the authors' reprints.

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5. Lubarsch, O., quoted in Schottländer and Kermauner,[1] p. 510.

The difficulty here is the same as that which exists for the cytological smear or any other diagnostic method that depends exclusively on the intrinsic morphology of the epithelial cells rather than on peculiarities in their relation to, and behavior toward their environment. It arises out of the fact that there are benign conditions that may so closely mimic the cellular changes of early carcinoma as to make them virtually indistinguishable from one another.[6] Only when the atypical quality is marked, and then only in the hands of the most expert pathologist, can a fairly definite diagnosis be made, as Lubarsch puts it, "intuitively," on the basis of the cell picture alone. The study that forms the subject of our paper was undertaken with the object of throwing some light on this problem, by analyzing the results of our own experience with the

Fig. 1 (case 4).—Photomicrograph of cervical biopsy specimen obtained Oct. 19, 1928, four years before the final diagnosis of invasive carcinoma. In retrospect, this represents the only example of in situ carcinoma in our series (× 25.2).

histological method over a period of 16 years. Before presenting our findings, a clear definition of terms is essential.

DEFINITION OF TERMS

As regards the cellular changes that characterize carcinoma in situ, there seems to be fair agreement. Observers speak of marked anaplasia, evidenced by the presence of completely undifferentiated squamous cells, which fill the entire thickness of the mucosa. They describe a clear line of demarcation between the normal and abnormal epithelium, some stating that it is always oblique [2] and others implying that it may be oblique or perpendicular. Additional descriptive details include loss of layering and disorderly arrangement of the cells, hyperchromatism and polynucleosis, disparity in the size, shape, and staining qualities of the nuclei, disturbance of the nuclear-protoplasmic ratio, increased mitotic activity, loss of polarity, and an intact basement membrane.

On other points relating to this lesion, there seems to be some confusion. Some treat it as already malignant [7] while others consider it only potentially so. The latter are divided as to whether malignant transformation is inevitable. Some hold that it is; others [8] imply that it is not, by classifying as carcinoma in situ cases in which regression was seen to occur. There is also some difference of opinion as to what constitutes invasion and consequently much confusion as to where the line between "in situ" and invasive carcinoma shall be drawn. To support a diagnosis of invasive carcinoma, some [9] require that there be extension of the atypical cells beyond the basement membrane, with actual infiltration of the fibromuscular stroma, while others [10] accept extension of the squamous cells below the surface epithelium into the cervical glands. At the other extreme are those who believe that "minimal stromal invasion" [5] or "questionable invasion of the basement membrane" [11] does not exclude a case from the "in situ" category.

As used here, the term carcinoma in situ denotes squamous cell carcinoma during the initial phase of its development, when the cells are still within the confines of the surface epithelium. That there is such a phase can hardly be denied so long as we accept the premise that this type of malignant lesion arises from, and therefore, of necessity, is initially within the surface epithelium. We consider the cells of the in situ carcinoma to be already malignant. Were they not, the term carcinoma, even though qualified by "in situ," would be a misnomer. Since irreversibility is a *sine qua non* of malignancy, we consider the lesion to be irreversible and therefore do not apply the term carcinoma in situ to any case in which the atypical changes have been seen to regress. We believe that the cells of the true intraepithelial carcinoma possess all the attributes of a malignant cell, including the power to invade. Descriptions [12] of the behavior of the malignant cells within the surface epithelium at the advancing margin of invasive growths strongly suggest that they have this power, exercising it within the limits of the epithelium. "Self-invasion" has been suggested [6b] to describe their peculiar ability to progress through the surface epithelium by "insinuating" themselves between neighboring epithelial cells.

As proof of invasion sufficient to exclude a case from the "in situ" category, we accept any change that indicates that the squamous cells have begun to exercise their invasive powers beyond the confines of the surface epithelium. It is not sufficient that they have extended into the cervical glands. Since these glands offer free access, entrance into them requires no exercise of invasive power and is therefore no proof that the entering cells possess or are exercising such power. Indeed, just such an extension into the cervical glands is a common finding in benign healing erosions and other benign proliferations.[12b] Were we to accept this as evidence of invasion,

6. (*a*) Ferguson, J. H.: Some Limitations of Cytological Diagnosis of Malignant Tumors, Cancer **2**: 845-852 (Sept.) 1949. (*b*) Bechtold, E., and Reicher, N. B.: The Relationship of Trichomonas Infestations to False Diagnoses of Squamous Carcinoma of the Cervix, Cancer **5**: 442-457 (May) 1952.

7. (*a*) Schiller,[3] (*b*) Broders, A. C.: Carcinoma in Situ Contrasted with Benign Penetrating Epithelium, J. A. M. A. **99**: 1670-1674 (Nov. 12) 1932.

8. Younge, P. A.; Hertig, A. T., and Armstrong, D.: Study of 135 Cases of Carcinoma in Situ of Cervix at Free Hospital for Women, Am. J. Obst. & Gynec. **58**: 867-895 (Nov.) 1949.

we would increase the likelihood of making false positive diagnoses of invasive carcinoma.

To support a diagnosis of invasive carcinoma, there must be evidence of an actual break, either through the basement membrane of the surface epithelium or, if the cells have entered the cervical glands, through the membrane that separates these glands from the surrounding stroma. The break may be minimal, being evident only in a dissolution of the membrane. According to our criteria, therefore, any case showing unmistakable dissolution of the membrane or the slightest degree of stromal invasion may not be classified as in situ carcinoma. We also exclude from the "in situ" category any case in which examination of other sections reveals that invasion existed elsewhere in the cervix at the time when the suspicious specimen was obtained.

MATERIAL

In the gynecologic division of the department of obstetrics and gynecology of the Jefferson Medical College and Hospital, between 1930 and 1946, we examined a total of 4,152 cervical biopsy specimens from patients hospitalized for pelvic lesions or gynecologic disorders. All diagnoses of malignant disease were made on the basis of the characteristic morphological changes plus evidence of invasion.

In the face of the growing trend toward the "in situ" school of thought, the question arose: Are we justified in continuing to demand proof of invasion, on the ground that it safeguards the pathologist against the error of labeling as malignant cases that are actually benign? On the other hand, may we be wrong in requiring such proof since, by so doing, we may overlook very early cases of carcinoma and lose the advantage of early treatment? Obviously, if such cases were being missed, the fact could not long remain unknown. Sooner or later they were bound to turn up, and the oversight would be made a matter of undeniable record.

To ascertain the validity of our diagnostic approach and, indirectly, that of the "in situ" view, we have reviewed our histological diagnoses in the light of all available follow-up records. The types of lesion encountered in our series are presented in table 1. These are divided into a benign and malignant group. The benign group includes cases of normal cervical epithelium, erosions, polyps, and other less common cervical lesions, such as myomas and fibroids. The malignant group includes 474 cases of squamous cell carcinoma, a much smaller group of adenocarcinomas, and a single instance of sarcoma. It will be noted that squamous cell carcinoma occurred in 11.4%. The commonest findings were the benign cervical erosions, which made up 57.2% of the series.

INVASIVE CARCINOMA WITH PREVIOUS CERVICAL BIOPSY

In making our analysis, our object was to determine whether any in situ carcinomas had been overlooked in our series. We searched first among the 474 squamous cell carcinomas for instances in which a previous cervical biopsy specimen was available for examination. In all, we could find only nine cases with cervical biopsy specimens obtained between seven months and nine years before the presence of invasive carcinoma was established. Our findings in this group are presented in table 2.

In three cases (2, 3, and 7), the original diagnosis of "no malignancy" was confirmed. The lesions noted in these cases were benign cervical polyp (cases 3 and 7) and chronic cervicitis (case 2). The interval between the original biopsy and that by which invasive carcinoma was established was 10 months and 6 years, in the two patients with polyps, and 9 years in the patient with chronic cervicitis. In none of the specimens could we observe atypical changes even approaching those that might support a diagnosis of in situ carcinoma.

In three cases (6, 9, and 1), we were able to confirm the original diagnosis of "suspicious but tissue inadequate." In case 6, the previous cervical biopsy specimen preceded the final diagnosis of invasive carcinoma by

Fig. 2. (case 4).—Photomicrograph of cervical biopsy specimen obtained Jan. 28, 1932, showing invasion of the stroma (× 50.3).

seven months. The original report was "suspicious of malignancy, but tissue inadequate for a satisfactory histologic diagnosis." On examining the original slide, we observed atypical cells, but the tissue included no stroma by which infiltration could be established. In case 9, there were three previous cervical biopsy specimens, obtained at monthly intervals two years before invasive carcinoma was established. The original diagnoses were made by one of us (J. H.). In the first specimen, we described stratified squamous epithelium with inflammation, and, in the second, benign cervical erosion with inflammation. Of the third, our original report stated "suspicious of malignancy but tissue is insufficient for a definite diagnosis." On reexamination, we were able to confirm our original conclusions. Atypical cellular changes, sufficient to arouse suspicion of malignant disease, were found to be present, but no evidence of invasion could be demonstrated in the scanty specimen that had been provided by the biopsy.

Case 1 is interesting because of the long interval, more than eight years, that elapsed between the original "suspicious" diagnosis and the development of frank carcinoma. Suspicion of malignant disease was first expressed by another pathologist on the basis of cervical tissue fragments that appeared by chance among endometrial curettings. His report stated: "Hyperplastic endometrium; some areas suspicious of beginning malignancy." No cervical biopsy or cauterization was done at the time. The patient received 1,200 mg.-hr. of radium to the fundus. On review, the original slide was found to include two small pieces of cervical tissue among endometrial curettings. One of these showed evidence of basal cell hyperactivity but included no underlying stroma. The other showed hyperchromatosis and polynucleosis of the basal cells with fading of the basement

Fig. 3.—Photomicrograph of cervical biopsy specimen obtained from a 20-year-old woman in the third month of gestation, diagnosed invasive carcinoma by a consultant pathologist. Note the marked epidermization of the surface and glands (× 46.1).

membrane against a scanty stroma. Though the tissue was inadequate for a definite decision, the changes noted would not, by our criteria, be compatible with an "in situ" diagnosis, but point rather to very early invasion. It is regrettable that there was no cervical tissue from which we could determine the precise extent of the original lesion. These three cases, encountered over 20 years ago, emphasize the importance of circular biopsy to provide the pathologist with sufficient tissue for diagnosis.

In two cases (5 and 8) review of the original slide showed early invasion that had been missed. In case 5, the previous biopsy specimen was obtained four years before invasive carcinoma was established. Another pathologist noted marked hyperplasia of the squamous epithelium, but judged it to be benign because he could observe no evidence of infiltration of the stroma. On review, we were able to demonstrate definite evidence of a breakthrough. In case 8, there was also a four year interval between the original biopsy and that which established invasion. The previous diagnosis was made by one of us (J. H.), whose conclusion at that time was: "Cervical erosion; very suspicious of malignancy; case should be watched." On reexamining the original slide, we noted changes very suggestive of early invasion. For further confirmation, we recut the original block. The new sections left no doubt as to the presence of early but unmistakable invasion. This case represents the only instance in our series in which the presence of invasion was missed by us.

These two cases emphasize the importance of a careful search for even the slightest evidence of invasion. In the early carcinoma, a minute and painstaking inspection may be necessary before a definite decision can be reached. In case of doubt, additional sections may be needed to confirm the diagnosis. These cases are of further interest because of the long interval, four years, between beginning invasion and frank malignancy, indicating that an invasive growth may remain clinically symptomless for a considerable period of time.

Case 4 represents the sole example of true in situ carcinoma in our entire series. Four previous cervical biopsy specimens were available for review. The first was obtained four years before the final diagnosis of invasive carcinoma (fig. 1). It was diagnosed by another pathologist as "marked hyperplasia and hyperkeratosis of the squamous epithelium, suggestive of malignancy." Since the submucosal tissue was too scanty to determine whether infiltration had occurred, he requested another, deeper biopsy. The next specimen, provided almost three years later, was originally examined by one of us (J. H.), who described a thick, stratified and cornified layer of squamous epithelium with atypical basal cells, and suggested that the lesion might represent a slow malignant growth. Since no stroma could be seen, another, deeper biopsy was requested to determine infiltration and it was recommended that the patient be watched.

The third and fourth specimens were provided within the following two months. The gynecologist described the tissue as "coming away in strips." On both occasions, these strips again failed to include the underlying stroma. Of both specimens, another pathologist said: "Very suggestive of malignancy; suggest deeper biopsy to determine infiltration." Not until six months later did biopsy yield submucosal tissue revealing invasion (fig. 2). On reexamining these four specimens, we were able to confirm the original reports. In this interesting case, we were apparently dealing with a predominantly exophytic growth, which, at least in the portions accessible for purposes of biopsy, remained intraepithelial for a considerable period.

Thus, during a period of 16 years, while adhering to those criteria of malignancy that include evidence of invasion, we missed 2 out of 4,152 cases, an error of 0.048%. The error in case 8, in which invasion was present but was not recognized, was the fault of the pathologist. In case 4, on the other hand, the diagnosis was missed because our criteria of malignancy did not permit a definite decision without proof of invasion. Only

the latter may be said to reflect unfavorably on our diagnostic approach. Our experience would certainly suggest that insistence on proof of invasion creates only a slight risk of overlooking early malignant lesions of the cervix. The use of circular biopsy, which was not then employed, and insistence on multiple sections or a second biopsy in any doubtful case might reduce this small percentage of error even further.

FOLLOW-UP FOR CANCER-LIKE EPITHELIUM

To make certain that our benign group did not include in situ carcinomas that we had overlooked, we combed this group for cases that might conceivably fall into this category. Our series of 2,377 benign cervical erosions showed varying degrees of healing. In the vast majority, i. e., 2,340 cases, the surface epithelium showed no atypical changes. In 37, or 1.3% of the cases, however, there was very pronounced epithelial activity with surface and glandular epidermization, the cytological changes mimicking those seen in malignant neoplasia. In one of these cases the patient was a young pregnant woman. Similar atypical changes were encountered in seven polyps, making a total of 44 cases in which such changes occurred. The average age of these women was 40.4 years. Such bizarre changes have also been observed in hyperhormonal states and in inflammatory disease.[13] It is noteworthy that inflammatory changes were observed in 10 of the 37 erosions.

The points of resemblance and difference between these benign atypical lesions and in situ carcinoma are indicated in table 3. None of the cytological characteristics listed is invariably present. At times all and at times only one may be found. In other words, there is no single cytological characteristic that is specific to either lesion. It can therefore readily be seen that these cancer-like or "carcinoid" lesions may create a serious pitfall for the unsuspecting pathologist, who is eager to detect cervical carcinoma in its intraepithelial phase. Many observers are aware of this pitfall and warn against it, but each, including ourselves, is under the fond illusion that, while others may fall prey to such error, his own series is above criticism.

While these 44 atypical cases were diagnosed as benign, the gynecologist was nevertheless alerted to their bizarre nature and a follow-up was recommended. To make sure that these cases were in fact benign, we reviewed the original slides and investigated all available follow-up records to determine whether cervical carcinoma had subsequently developed. Since the diagnosis was made between 7 and 22 years ago, there was ample time for malignant disease to develop if it was destined to do so.

On reviewing the slides, the original diagnosis was confirmed in all cases. Personal follow-up records covering 5 to 20 years were available in 17 cases. In two additional cases, there was a follow-up of one and three years respectively (see table 4). All of these patients remained free of cervical malignant disease. In the single pregnant patient in this group, a prominent consultant pathologist reported invasive carcinoma. Repeat biopsies following delivery showed regression of the atypical changes and return of the cervical mucosa to normal (fig. 3 and 4). Repeat biopsies showing regression are also available for a second, nonpregnant patient in this group.

No personal follow-up records could be found for the seven patients with the cervical polyps; however, these cases need give us little concern in view of Meyer's observation [12b] that such lesions are seldom if ever carcinomatous, except secondarily by reason of invasion at the base. Our experience would seem to confirm his findings, for, out of 887 polyps, 885 were benign, and the 2 that showed malignant changes appeared to be secondarily involved by extension from the cervical mucosa.

For a possible clue to the outcome of the cases without a personal follow-up, we searched without success among the careful Follow-up Pelvic Malignancy Clinic records of Dr. Lewis C. Scheffey, head of our department, among

Fig. 4.—Photomicrograph of cervical biopsy specimen obtained from the patient mentioned in figure 3, three months after delivery by cesarean section and eight months after the first biopsy. Note normal cervical mucosa (× 46.1).

the records of other departments, and among the lists of deaths from pelvic cancer. This can be taken only as presumptive evidence that these patients remained free from cervical carcinoma.

Our findings in this group are in accord with those of Meyer [12b] and Schiller,[3] who made similar studies with a 5 to 12 year follow-up. From their experience and ours, it would appear that excessive epithelial activity, even in its more extreme forms, does not eventuate in invasive carcinoma.

INCIDENCE OF CARCINOMA IN SITU

Our failure to find more than one instance of true in situ carcinoma in our entire series suggests that this lesion is likely to be encountered only rarely in the average gynecologic clinic. That it is, to quote Taylor,[14] "an

ephemeral lesion" need not surprise us, if we recall that squamous cell carcinoma begins in the basal layer of the surface epithelium. As the malignant cells proliferate, they may progress upward through the epithelium and/or downward into the underlying stroma. The rate of their progress in either direction will depend at least partly on the resistance offered by the two types of tissue. As Meyer [12b] has pointed out, the growth may remain superficial for weeks or months in the presence of a highly resistant stroma, or it may begin to invade early, particularly in the presence of granulation tissue. It is conceivable that, when both tissues are equally permeable, the lesion will progress at the same rate in both directions. In the presence of inflammation or granulation tissue, it may be anticipated that its downward progress will be more rapid. It is only in the presence of an unduly resistant stroma that we may expect the carcinoma to remain intraepithelial long enough to be detected before invasion. From our experience, this type of case would appear to be comparatively uncommon.

In this connection, Taylor [14] recently estimated, on the basis of the known incidence of cervical carcinoma in the population, that 0.3% is the maximum possible detection rate of intraepithelial carcinoma in gynecologically symptomless patients. To quote Taylor: "Figures higher than 0.3%, perhaps even higher than 0.1 or 0.2% indicate that the group is not truly unselected, that the laboratory is not applying correct histological criteria, or that a considerable proportion of so-called intraepithelial lesions are either reversible or progress so slowly that they will not result in clinical carcinoma within the life span of the patients."

Our incidence of 1 in 4,152 cervical specimens, or 0.02%, is well within the theoretical limit drawn by this observer. Figures reported by other clinics (table 5) range from 0.3% [15] in unselected cases to 3.9% [16] in more selected series. The discrepancy between their figures and ours perhaps may be at least partly due to the inclusion in their series of lesions that we term "carcinoid." Were we to classify these lesions as in situ carcinoma, we would arrive at a figure of 1.02%, which closely approximates the 1.2% obtained by Younge's group [8] in a somewhat similar series. In view of the results of our follow-up studies, however, it would seem more accurate to retain such cases within the category of benign cases that require watchful waiting. To classify them as in situ or group O carcinoma and suggest that their failure to become malignant represents a "cure" would be inaccurate and misleading; moreover, it would give rise to false optimism regarding the curative effect of such simple measures as cauterization or cervical biopsy, not to mention other types of treatment that might have been employed.

DANGERS OF INDISCRIMINATE DIAGNOSIS

To determine the true incidence of intraepithelial carcinoma and dispel the existing confusion regarding its diagnosis and treatment,[17] there is need for some central body qualified to review all "in situ" diagnoses. This body might also be charged with the task of reviewing cases in which invasive carcinoma was said to have been preceded by in situ carcinoma and those in which in situ carcinoma was observed to progress to invasive carcinoma.[18] Before such reports may be accepted as conclusive, it is essential that both the in situ and invasive diagnoses be substantiated. The newly formed American Academy of Gynecology and Obstetrics might well be the forum for such a project.

Without the restraining influence of such critical analysis, the danger of false positive diagnoses will continue and grow. More and more reports are appearing of uteri removed on the basis of a diagnosis of in situ carcinoma in which no abnormality could be found. This is particularly distressing because most such diagnoses are being made during the childbearing age.

The indiscriminate diagnosis of in situ carcinoma creates the further danger of overlooking early invasion in patients in whom the lesion is truly malignant and consequently of treating such patients inadequately. When in situ carcinoma is suspected, it is of the utmost importance that multiple sections of the first suspicious biopsy specimen be made to exclude the presence of invasion elsewhere in the tissue. If this is not found, treatment should be withheld pending a second cervical biopsy to determine whether the condition is reversible or progressive. If it is truly in situ carcinoma, the slight delay can entail no real danger to the patient. On the other hand, should invasion be demonstrated, institution of adequate therapy will be assured and the danger of recurrence minimized.

To provide as complete a picture of the lesion as possible, circular biopsy is preferable to single or multiple "spot" biopsies.[19] To increase the number of cervical carcinomas detected while still amenable to treatment, routine cervical biopsies should be done periodically. This has for some time been a practice in our clinic, and we hope to report on our results in a later communication.

SUMMARY

A series of 4,152 cervical biopsy specimens is reported and the incidence of various cervical lesions indicated. A group of nine cases of invasive squamous cell carcinoma with previous cervical biopsies is analyzed, with particular emphasis on one case of carcinoma in situ. Follow-up studies in 37 cervical erosions and 7 cervical polyps showing atypical cellular changes mimicking those of carcinoma indicate that these cancer-like or "carcinoid" lesions do not eventuate in invasive carcinoma. The difficulty of differential diagnosis between them and in situ carcinoma is pointed out.

The low incidence of in situ carcinoma in our series is contrasted with higher figures elsewhere. A central body qualified to review all diagnoses of carcinoma in situ is proposed. Dangers inherent in indiscriminate diagnoses of in situ carcinoma are pointed out. The need for circular biopsy to assure an adequate specimen, multiple sections to exclude invasion, and repeat biopsies to determine the reversibility or irreversibility of the lesion is stressed. Routine cervical biopsies are recommended as a means of detecting more cervical carcinomas while they are still amenable to treatment.

1830 Spruce St. (3) (Dr. Hoffman).

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STROKE RESULTING FROM INTERNAL CAROTID ARTERY THROMBOSIS IN THE NECK

E. S. Gurdjian, M.D.
and
J. E. Webster, M.D., Detroit

Internal carotid artery thrombosis in the neck has been diagnosed with greater frequency since Sjöqvist, in 1936,[1] and Moniz, in 1947,[2] first reported on the angiographic findings in such cases. There have been several American reviews of the literature on this subject during the past three years. Papers by Fisher,[3] Elvidge and Werner,[4] Johnson and Walker,[5] and others discuss and describe personally observed cases and those in the literature during the past 15 years. Common, internal and external carotid artery thrombosis has been known for a longer period of time, and in the papers by a co-worker and us [6] a review of the literature on this subject and illustrative cases are given. An early paper on common carotid artery thrombosis was that by Ramsey Hunt,[7] who described the condition following an injury to the neck. In that paper, the typical findings of atrophy of the optic disc on the affected side with weakness or paralysis of the opposite half of the body are given.

In the past four years, we have had an opportunity to see 30 patients with internal carotid artery thrombosis in the neck. Among this group, three also had common and external carotid artery involvement. The remaining 27 were patients with involvement only of the internal carotid artery in the neck. It is interesting to note that only four of the entire group were women. As is true in the literature, a preponderence of cases involved the left side. The internal carotid artery thrombosis was on the left side in 19 cases and on the right side in 11. The age distribution (table 1) shows that this is primarily a disease of late middle life; however, patients under the age of 45 may suffer from this condition.

SYMPTOMS AND SIGNS

The symptoms and signs of internal carotid artery thrombosis of the neck have been described previously. A résumé is given herewith (table 2): The onset of the condition may be sudden, or the clinical course may be slowly progressive. In other instances there may be repeated attacks of cerebrovascular accidents of varying severity. A patient with a sudden onset of paralysis of one-half of the body, with or without unconsciousness, and with no history of trauma may be suffering from a thrombosis of the internal carotid artery in the neck. In 12 of our patients there was such an onset. In the remaining 18 there was a more slowly progressive course. In the latter group five had repeated attacks of hemiparesis or hemiplegia over a period of several months. Those with involvement of the right half of the body may also have associated speech disturbances due to a motor or sensory aphasia, or both. In three of our group homonymous hemianopsia occurred. In three patients there was optic atrophy with blindness on the affected side. Optic atrophy in such cases may be explained on the basis of thrombosis of the ophthalmic artery or its branches extending into the optic nerve. Such a complication is seen more frequently with thrombosis of the common, internal and external carotid arteries than with an involvement of the internal carotid artery alone. Headaches may be present in some patients. In our group seven patients had frequent headaches. A combination of headaches with progressive disability involving one-half of the body may simulate a mass lesion. Four of our patients had special studies carried out elsewhere, including ventriculography or encephalography in order to rule out a mass lesion in the cranial cavity. Since an angiogram was not done, diagnosis had remained obscure. In two of the series Jacksonian seizures involving the face and the upper extremity were seen. In four others a history of grand mal seizures was reported. Convulsive phenomena in our cases have not been common.

TABLE 1.—*Internal Carotid Artery Thrombosis in the Neck in Thirty Patients*

No. of Patients	Age Distribution	No. of Patients	Age Distribution
2	20-30	12	50-60
5	30-40	6	60-70
3	40-50	2	70-over

TABLE 2.—*Symptoms and Signs of Internal Carotid Artery Thrombosis in Thirty Patients*

Clinical Manifestations	No. of Patients
Hemiplegia-hemiparesis	28
Repeated hemiparesis	6
Generalized seizures	4
Jacksonian seizures	2
Headaches	7
Aphasia	9
Blindness in one eye	3
Homonymous hemianopsia	3

From Wayne University College of Medicine and University Neurosurgical Service, Grace Hospital.

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MECHANISM OF THE THROMBOSIS

The mechanism of the causation of the thrombosis is obscure. Thrombosis of the larger arteries of the neck in the course of debilitating disease and endocarditis is possible, and we have seen such an example not included in this study. Internal carotid artery thrombosis described

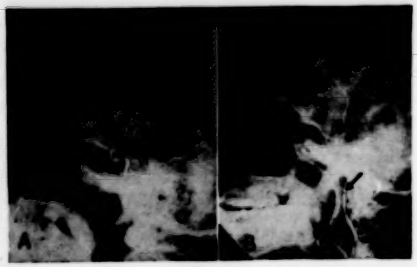

Fig. 1.—A 40-year-old patient had paresis of the right half of the body and a right homonymous hemianopsia. *A*, an angiogram showed thrombosis of the middle cerebral artery. *B*, two years later, on July 10, 1950, he was admitted because of weakness of the right half of the body, confusion, and right homonymous hemianopsia still present. An angiogram on July 11 revealed the carotid to be thrombosed in the cervical portion. Weakness completely subsided, but the homonymous visual disturbance persists to this date.

in this paper is a more chronic disease and appears to result from the operation of insidious factors producing atheromatous degenerations in blood vessels. Aneurysmal dilatations actually may occlude the internal carotid artery as documented by Saphir [8] who described several examples. Kinking was the chief reason for the occlusion in those patients with serpentine aneurysms of the internal carotid in or near the carotid canal at the base of the skull. High blood pressure and syphilitic infection appear to be of little importance in connection with this condition. Only four of our patients had hypertension, and syphilitic infection was not noted in any. Both in the literature as well as in our own group of cases the majority of the patients had left-sided involvement. On the left side the common carotid artery is a branch of the aortic arch, and this may produce stresses on the bifurcation of the carotid resulting in atheromatous changes in this region. Atheromatous changes at the bifurcation are fairly common, particularly in the older age group. According to the work of Keele,[9] atheromas of the carotid sinus neighborhood occur in over 80% of the cases. It is quite likely that such atheromatous changes may be microscopic rather than macroscopic, because atheromatous plaques easily palpable in operative dissections in open angiography are not common in older patients coming to operation for reasons other than cerebrovascular disease. In patients who have thrombosis of the internal carotid artery large atheromatous plaques may be felt at the bifurcation during the operative procedure. With atheromatous changes at the bifurcation, ulcerating portions may break off, resulting in forward embolism with repeated attacks of neurological deficits. Not all cases of internal carotid artery occlusion, however, have a thrombosis extending upward from the region of the bifurcation. We have had three patients with thrombosis of the internal carotid artery higher up toward the base of the skull. Also, involvement of the internal carotid artery in its intracranial course near or at the siphon is a common angiographic finding. Over a period of two years we have observed an example of retrograde thrombosis. This patient, who on the original angiogram presented a middle cerebral artery occlusion, showed the presence of a thrombosis in the carotid artery in the neck when another angiogram was obtained because of a second attack of paralysis two years later (fig. 1).

ANGIOGRAPHIC CHARACTERISTICS

The angiographic characteristics of internal carotid artery thrombosis are shown in figure 2. There may be a small nubbin of a patent artery in the proximal portion of the internal carotid artery at the bifurcation, or the internal carotid artery is completely shut off at its origin from the common carotid (fig. 3-6). In still others the obstruction occurs higher up in the neck. The angiographic patterns about the carotid bifurcation are typical and can be depended upon to prove that thrombosis is present. The angiographic pattern of an occluded vessel several centimeters above the carotid bifurcation may be open to question; however, in two of three patients in this category, open angiograms were done with pressure on the common and external carotid arteries. The medium did not pass up the internal carotid artery in these patients. Consequently, we feel that such a pattern does occur.

During angiography, in patients suspected of internal carotid artery thrombosis, it is important to have a roentgen exposure including the neck during the injection. The needle should be introduced low in the neck. With internal carotid artery thrombosis, the external carotid artery may remain patent for many years. In several of our cases the artery has remained patent from 2 to 4 years (lengths of follow-up). The external carotid artery may supply the means of vascularizing the brain through communications with the frontal and supraorbital branches of the ophthalmic artery. Optic atrophy and blindness are thus much less common with internal

Fig. 2.—Angiographic patterns of occlusion of the internal carotid artery in the neck based on the cases in this series.

carotid artery thrombosis. In common carotid artery thrombosis with involvement of both the internal and external carotids, a higher incidence of optic atrophy is reported. Among these patients there may be a greater likelihood of occlusion of the ophthalmic artery or branches. If forward embolism is a factor in the cau-

8. Saphir, O.: Serpentine Aneurysm of the Internal Carotid Artery, with Resulting Encephalomalacia and Cerebral Hemorrhage, Arch. Path. 20: 36-45 (July) 1935.

9. Keele, C. A.: Pathological Changes in the Carotid Sinus and Their Relation to Hypertension, Quart. J. Med. 2: 213-220, 1933.

sation of repeated attacks, then the ligation of the vessel above the area of the thrombus or the atheromatous plaque may be worth while; however, in many instances one cannot ligate the artery above the upper end of the clot when the ligation is carried out in the neck.

DIAGNOSIS

The possibility of diagnosing thrombosis of the internal carotid artery before angiography by lack of pulsations in the tonsillar area was investigated. In such cases one could still feel pulsations in this region from the external carotid artery on the medial aspect of the parotid neighborhood. This particular test is difficult because one may need to have the throat anesthetized before palpation. It is probably inaccurate in many instances. Although there may be a difference on the two sides, one cannot accurately diagnose internal carotid artery thrombosis by palpation for pulsations on the two sides of the neck. Retinal studies for diagnosis were not carried out in this work. Milletti [10] states that the systolic retinal pressure on the normal side falls 50% on compression of the carotid in the neck, but on the side where the internal carotid is thrombosed no change occurs on compression. In our hands, the diagnosis of thrombosis of the internal carotid artery by differences in the pulsations on the two sides of the neck is not dependable.

OPERATIVE AND CLINICAL FINDINGS

In 15 of the 30 patients the carotid bifurcation was exposed and a portion of the thrombosed internal carotid artery was excised. The gross pathological picture at

Fig. 3.—A 54-year-old patient had progressive hemiparesis of the right side with a speech disturbance. The angiogram, taken Nov. 28, 1950, shows thrombotic obstruction of the internal carotid artery at its origin from the common carotid. The patient was treated by stellate blocks with no change in condition. This patient died March, 1952, after another attack of cerebrovascular accident.

operation included a marked atheromatous change at the bifurcation. On palpation this region felt hard and contained masses of large, calcareous matter. The internal carotid artery past the bifurcation was smaller than the external carotid artery and in a contracted state in some cases. In other patients the internal carotid artery was swollen, sausage-like, and pulseless. On opening the artery of the older patients, an organizing clot having a yellowish-gray color was found. A small amount of bleeding from the cut surface due to canalization of the

Fig. 4.—A 48-year-old patient had motor aphasia with weakness of the right half of the body. He was hospitalized a month after onset. An angiogram on Jan. 20, 1952, showed a complete block of the left internal carotid artery. This patient improved in speech, and the weakness of the right half of the body completely disappeared in four weeks after the angiogram was taken.

clot was noted. In patients in whom the clot was reasonably fresh a current-jelly-like material was removed either by aspiration or by opening the artery. Again, the artery did not bleed or bled very little on cross section. In the cases with a fresh clot little organization between the clot and the wall of the artery was seen because the section was above the level of the atheromatous change. In two of the patients atheromatous masses of semicalcareous matter extended into the lumen of the internal carotid artery from the bifurcation. Although the bifurcation appeared almost completely occluded by the presence of calcareous masses, yet the external carotid artery was pulsatile and was transporting blood.

The microscopic appearance of the tissues removed showed no evidence of thromboangiitis obliterans in any of the cases studied in our group. In the literature the majority of the patients with microscopic study were recorded as examples of Buerger's disease of the carotid artery. In our patients many of the sections had atheromatous changes in the arterial wall (fig. 7). In some cases thickening of the intimal lining was also present. In the more chronic cases canalization was evident, but this probably was of no value from the standpoint of transporting blood. Atheromatous plaques were seen in 13 cases, and ulcerating plaques were seen in 3 cases

10. Milletti, M.: Does a Clinical Syndrome of Primitive Thrombose of the Internal Carotid at the Neck Exist? Acta neurochir. 1: 196-231, 1950. Bailliart, P.: Circulation artérielle rétinienne: essais de détermination de la tension artérielle dans les branches de l'artère centrale de la rétine, Ann. d'oculi. 154: 257-271, 1917.

(fig. 7). Complete organization of the clot in the lumen was seen in nine cases.

Air studies in patients with internal carotid artery thrombosis revealed either uniformly dilated ventricles or slightly more dilatation of the lateral ventricle on the side of the thrombosis. Delta activity in the parieto-temporal region on the affected side early in the course of the disease were characteristic electroencephalographic findings. In many cases, as the condition became more chronic, the electroencephalographic pattern became more normal. This was true even among those patients with residual neurological deficits of considerable degree.

PROGNOSIS

The prognosis is uncertain in this condition. Among the group with progressive hemiparesis eventuating in hemiplegia, there may be disabling sequelae, particularly

Fig. 5.—A 43-year-old patient became paralyzed in the right half of the body, and motor aphasia developed two weeks previous to admission. History was obtained of several attacks of numbness in the right upper limb and one or two attacks of blindness in the left eye occurring during the previous four months. An angiogram taken on April 28, 1952, revealed thrombosis of the internal carotid. Excision of the carotid and ligation of the cut ends was done on April 30. Improvement in the patient's speech with almost complete recovery in motor action on the right half of the body has been noted.

with left-sided involvement of the brain. There are varying degrees of speech disturbances, which persist for many months or years. Some patients deteriorate to a point of confinement in their home or hospital. In the group with a sudden onset of hemiplegia there may be gradual recovery. After a certain level of improvement the condition may then remain stationary. Again, with left-sided involvement in the brain, the speech disturbances remain for many months or years even though the patient may overcome the weakness or paralysis of the right half of the body in a matter of a few weeks to several months. There are a few, particularly among the younger group, who appear to recover function following a period of disability due to the cerebrovascular disease. In this group of 30 who have been followed up from 12 months to 5 years, there have been 2 deaths. Eight cases

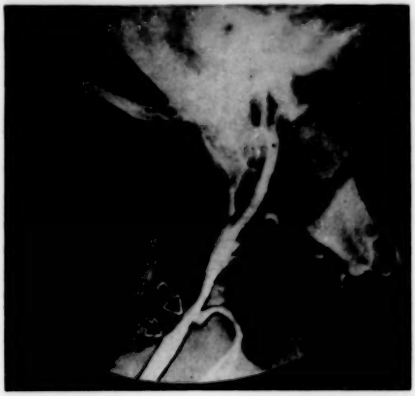

Fig. 6.—A 58-year-old patient had a stroke with aphasia of one week duration in January, 1951, and a second stroke with severe speech disturbance in February. Attacks of numbness of the hand and leg on the right side occurred with a fairly severe attack in December. An angiogram on Feb. 22, 1952, showed complete obstruction of the internal carotid artery on the left side. On Feb. 26 excision of a portion of the carotid artery and ligation of the cut ends on the left side was performed. There have been no recurrences of numbness or speech disturbance since operation.

Fig. 7.—Microphotograph of internal carotid artery showing disintegration and ulceration of the atheromatous plaque.

appear to have recovered satisfactorily. Ten patients have varying degrees of disability from hemiparesis to hemiplegia and varying degrees of speech disturbances (with a left-sided lesion). Nine patients are hospitalized in

facilities such as a veterans hospital or a convalescent home because of severe mental or bodily disability. There has been no follow-up in one case.

TREATMENT

The treatment of internal carotid thrombosis is generally unsatisfactory. It is conceivable that thrombosis of the internal carotid may occur with few or no serious sequelae and the patient may continue in good health after the initial short period of disability. What may be considered a spasm or cerebrovascular disease of mild degree may in fact be the result of a carotid artery thrombosis. Only a more vigorous search will reveal the true pathological state in such cases. It is obvious that the irrefutable diagnosis of this condition depends on angiography or neck dissections. Consequently, it is proper to state the indication we have used for angiography. A sudden onset of hemiplegia or hemiparesis, with clear spinal fluid under normal pressure, or repeated attacks of hemiparesis or hemiplegia, although short-lived, should be studied by angiography. Certain patients in this group will have internal carotid artery thrombosis.

Following diagnosis, the management may include, first, bilateral stellate block; second, excision of the cervical sympathetic on one or both sides; third, the use of anticoagulants; fourth, excision of a freshly formed clot to re-establish circulation through the thrombosed area; fifth, carotid artery ligation and excision of a portion of the thrombosed vessel; sixth, ligation of the carotid siphon intracranially with a silver clip; and seventh, rehabilitation. In our hands the use of stellate blocks, unilaterally or bilaterally, have not been encouraging in the management of this condition. This form of therapy has been used in every instance. We have not used anticoagulant therapy. In certain instances of partial occlusion this form of therapy may be desirable. We have yet not seen a patient with this condition early enough to attempt excision of the thrombus. We have not ligated the carotid intracranially in these cases. The rationale of such a measure is to prevent forward embolism. Excision and ligation of the internal carotid artery was carried out in 15 patients. Excision of a portion of the carotid artery may result in interruption of the periarterial sympathetics with release of vasoconstrictor influences to the larger blood vessels of the brain on the affected side. Second, it may prevent forward embolism resulting in more extensive involvement of the brain, if the ligation is done above the column of the clot. Third, excision of a portion of the carotid may prevent transmitted pulsations through the column of clot and thus make it less likely for forward embolism to occur by a mechanical shaking-free of a fragment. The operated patients have not been followed for a sufficiently long period to compare with results in nonoperated patients. Immediate improvement after operation is seen in some cases, and a further report will be made in the future on such follow-up studies. The role of rehabilitation to mobilize such patients and to help them regain power in paralyzed limbs and regain speech is important and deserves emphasis.

CONCLUSIONS

1. Internal carotid artery thrombosis in the neck may be more common than is suspected.
2. The clinical picture may be identical with that seen in strokes. There are three main types: sudden onset of hemiplegia or hemiparesis with or without unconsciousness; repeated attacks of minor and short-lasting paralysis; and slowly progressive hemiplegias.
3. A forward embolus arising from atheromatous plaques at the bifurcation may be the important etiological factor. Retrograde thrombosis is also possible.
4. Treatment may include ligation of internal carotid artery, section of carotid plexus, and rehabilitation.

840 David Whitney Bldg. (Dr. Gurdjian).

PULMONARY INFARCTION MISTAKEN FOR BRONCHOGENIC CARCINOMA

Rex B. Perkins, M.D.
and
H. H. Bradshaw, M.D., Winston-Salem, N. C.

In dealing with primary carcinoma, the thoracic surgeon enjoys some advantage over the abdominal surgeon as regards the diagnostic possibilities of the roentgen ray. The aerated lungs afford an excellent contrast for the demonstration of abnormal shadows.[1] Early bronchogenic carcinoma will almost always give some sort of abnormal x-ray shadow. This fortuitous advantage should be vigorously exploited in the direction of awareness of the possibility of malignancy, immediate diagnostic efforts, and institution of proper treatment. Although progress is slow, the idea is now being widely promulgated that great suspicion should be leveled at any unusual or abnormal x-ray shadow that cannot be satisfactorily explained and that may represent one of the roentgen manifestations of bronchogenic carcinoma.[2]

Inherent in this justifiable attitude is the first problem to be met, namely, the various types of shadows under which carcinoma may masquerade on the roentgenogram (not including the obvious mass lesions of the hilum or peripheral lung). Early bronchogenic carcinoma may appear as any one or a combination of the following conditions: bands of atelectasis, peripheral or hilar; atelectasis of a segment, several segments, a lobe, or even a lung; lung abscess, in any location; pleural effusion; consolidation; and "pneumonitis," "resolving pneumonitis," "atypical pneumonia," and "virus pneumonia." Probably no two chest roentgenograms of proved bronchogenic carcinoma are just alike. Those who consider carcinoma only when confronted with marked changes in the roentgenogram will miss many early cases.

From the Department of Surgery, Bowman Gray School of Medicine, Wake Forest College.

Because of space limitations, some of the bibliographic references have been omitted from THE JOURNAL and will appear in the authors' reprints.

There is a considerable group of patients in whom mass survey methods have shown a silent lung lesion [1] or in whom the lesion was found following roentgen examination for very minor pulmonary or general symptoms. The question arises of what is to be done with this group of patients after the history, examination, laboratory data, roentgen studies, and various specialized diagnostic maneuvers have failed to yield a histological or other adequate explanation for the lesion. In the light of our present knowledge, the answer is exploratory thoracotomy,[2] and this operation is being done with increasing frequency. In most instances, it should be done without delay, within two to four weeks. In those cases in which any temporization is permitted, the roentgen picture should be followed closely and exploration done if the lesion is not resolving. The burden of proof rests with the one who holds that the lesion is not malignant. However, in the course of the program mentioned above, it is inevitable that some patients will, indeed, prove to have non-neoplastic disease for which the treatment may be medical. Thus some patients will be needlessly subjected to surgery. Other patients, however, will benefit by having their neoplastic lesions adequately resected in an early stage. The advantages of such an approach should far outweigh the disadvantages.

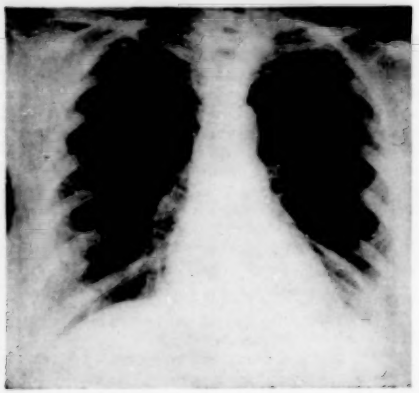

Fig. 1 (case 1).—Density in the right lung on Jan. 31, 1952.

Since carcinoma is the great imitator of other pulmonary conditions, then the reverse may be true; i. e., benign lesions may often simulate bronchogenic carcinoma. Several types of pulmonary lesions have been subjected to surgery under the mistaken diagnosis of carcinoma, although reports of these events are not common in the literature.[4] The purpose of this paper is to call attention to one particular benign lesion in which surgery is not indicated—pulmonary infarction.

3a. Johnson, C. R.; Clagett, O. T., and Good, C. A.: The Importance of Exploratory Thoracotomy in the Diagnosis of Certain Pulmonary Lesions, Surgery **25**: 218, 1949.

4a. Miller, J. E.: Angiocardiography, Am. J. Roentgenol. **64**: 214, 1950.

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REPORT OF CASES

CASE 1.—A 64-year-old housewife, admitted Feb. 23, 1952, and discharged March 13, 1952, was referred for an asymptomatic "coin lesion" in the periphery of the right lower lung field, discovered four weeks previously on a routine chest roentgenogram. At that time she had spat up a small amount of blood, thought to come from her nasopharynx. Eye, ear, nose, and throat examination was normal. At her local sanatorium, tests were negative for tuberculosis. Bronchoscopy was normal, and bronchoscopic washings were negative for tumor cells. She denied cough, sputum, pain, fever, chills, or weight loss. The lesion did not change in size on several examinations (fig. 1), and she was referred to us for thoracotomy. Her general health had always been very good. There was no history of phlebitis. She had a left hiatus hernia of eight years' known duration. One sister had died two years previously of abdominal carcinomatosis. The review of systems was noncontributory.

Physical examination showed a temperature of 98.6 F (37 C), pulse rate of 80, and blood pressure of 140/70. The lungs were clear except for hyper-resonance and peristaltic sounds over the left precordium. The heart was regular without murmurs. Pelvic and rectal examinations were normal. The extremities showed no edema or varicosities, and had good arterial pulsations.

The urinalysis was negative. Other findings were: hemoglobin, 12 gm. per 100 cc., red blood cells, 3,860,000 per cubic millimeter, sedimentation rate, 10 mm. per hour, and white blood cells, 8,200 per cubic millimeter. Differential count was normal. The nonprotein nitrogen was 46 mg. per 100 cc. Total serum protein was 5.8 gm. per 100 ml. The electrocardiogram showed normal sinus rhythm with no evidence of myocardial disease. Roentgen (fig. 2) reports stated: "Large hiatus hernia which extends into the chest. Coin lesion on the base of the right lung which most likely represents a hematoma, chondroma, or adenoma."

On Feb. 27, 1952, thoracotomy was done, and there was found at the inferior tip of the right upper lobe anterolaterally an irregular, rounded, and firm subpleural mass 2 cm. in diameter. Simple excision was done, with a frozen section report of "organizing infarction." The postoperative course was uneventful.

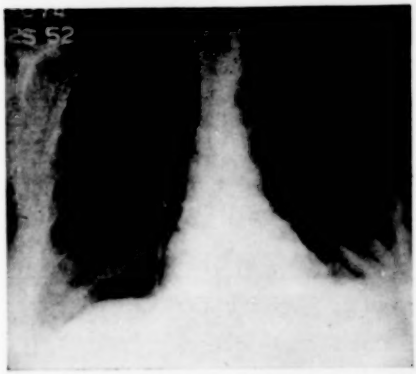

Fig. 2 (case 1).—Lesion on Feb. 25, 1952. It is now dense, discrete, and round. The hiatus hernia is seen. This film also demonstrates how low in the chest an upper lobe lesion may appear on the ordinary postero-anterior film.

At no time was there any subjective or objective evidence of phlebitis of the extremities. The final pathological report was: "Pulmonary infarct. Small hemangioma of the pleura. End-arteritis obliterans of pulmonary vessels."

This case illustrates the fact that a pulmonary infarct does not necessarily cast a wedge-shaped shadow on the roentgen film. The finding of a round shadow has been

responsible for at least one attempted pneumonectomy for supposed tumor of the lung.[5] The pathogenesis of the infarct was not found in this case, as there was no demonstrable source of emboli in the heart, extremities, pelvis, or elsewhere. Endarteritis obliterans is commonly seen as a result of organization of thrombi or as a reaction to injury of the vessel wall.[6]

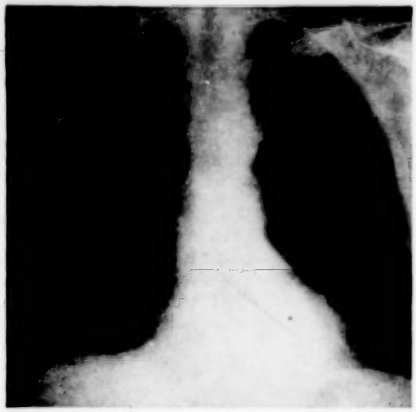

Fig. 3 (case 2).—Right hilar mass and atelectasis of lateral segment of middle lobe.

CASE 2.—A 56-year-old retired motion picture operator, who was admitted July 18, 1950, and who died July 23, 1950, entered the hospital for investigation of chest complaints of one week's duration, prior to which time he had been perfectly well. On July 12, 1950, he awoke from a nap in a chair with a feeling of soreness and "pleurisy" in lower lateral aspect of the right side of the chest. He began to have a slight cough with production of almost no sputum and began to run a low grade fever. He was treated with penicillin. For four days prior to admission, he coughed up a few flecks of bright red blood in the sputum. His symptoms subsided, and at the time of admission he had no fever or pain but continued to cough slightly and raise a little blood. A roentgenogram taken elsewhere showed a shadow in the right lower lung field.

The patient's health had formerly always been excellent. He had had no serious operations, illnesses, or injuries and had never been in a hospital before. He had "flu" and pneumonia in 1917 but otherwise had had no pulmonary diseases. There was no history of hypertension or cardiac disease, and he had good "wind." His weight was 187 lb. (85 kg.). He had lost 30 lb. (13.6 kg.) in the past three years while on a reducing diet. He had smoked two packs of cigarettes daily for 30 years.

The temperature was 98.6 F, respiratory rate 20, pulse rate 84, and blood pressure 118/70 mm. Hg. The patient was an obese, middle-aged man who appeared well. The extremities showed no edema. Retinal vessels showed minimal sclerotic changes. The lungs were clear to examination except for diminished breath sounds and a few moist rales at the right base, posteriorly. The heart was not enlarged, the rhythm was regular, and there were no murmurs. The prostate was slightly enlarged, smooth, and rubbery. The remainder of the examination was normal.

The urine was normal, the hemoglobin level, 11 gm. per 100 cc., red blood cell count, 4,320,000 and white blood cell count, 10,100 per cubic millimeter, with polymorphonuclears 46% and lymphocytes 53%, nonprotein nitrogen level, 26 mg. per 100 cc., total serum protein, 5.9 gm. per 100 ml., serum carbon dioxide, 53 vol. %, and serum chlorides, 102 mEq. per liter.

An electrocardiogram showed no evidence of myocardial disease. Posteroanterior and lateral roentgenograms of the chest showed an abnormal shadow in the region of the lateral segment of the right middle lobe, interpreted as segmental atelectasis and infiltration with some associated pleural thickening. There was a nodular density about 3 cm. in diameter near the inferior portion of the right hilus (fig. 3). Bronchograms showed incomplete visualization of the lateral branch of the right middle lobe bronchus. Laminographic examination of the right hilar region confirmed the presence of an oval-shaped mass lesion 3 cm. in diameter, lying adjacent to the lower lobe bronchus, close to the right middle lobe bronchus. This mass was best seen in the film taken at a depth of 12 cm. from the anterior chest wall (fig. 4). Bronchoscopy showed a normal tracheobronchial tree. Bronchoscopic aspiration of secretions was examined by the Papanicolaou technique and a class 2 report was given, i. e., atypical cells present but without abnormal features (negative). A culture of bronchial aspiration showed hemolytic staphylococci (coagulase negative), alpha streptococci, and gamma streptococci. Smear showed no acid-fast bacilli.

On July 21, 1950, the right seventh rib was resected. When the chest was opened the lung appeared normal, except that the lateral segment of the middle lobe was collapsed and was apparently completely airless. The pulmonary artery at the hilum presented an aneurysm-like dilatation that was very definite and prominent, measuring about 2.5 to 3 cm. in diameter. It appeared to encroach on the bronchus to the lateral segment of the middle lobe. It was soft and pulsatile, and needle aspiration produced blood. As no other hilar lesions were found, it was felt that the dilated pulmonary artery represented the hilar mass demonstrated by roentgen examination. It was also felt that this lesion was causing the atelectasis of the lateral segment of the right middle lobe. This segment was easily resected. The chest was closed with catheter drainage. The patient tolerated the procedure very well, and blood loss was not excessive, being replaced by 1,000 cc. of blood.

Postoperatively, the patient did well. The temperature went to 101 F rectally. On the first postoperative day, mild distention occurred, which was controlled by use of gastric suction, a rectal tube, and a small enema. Forty-four hours postoperatively, while on the bed pan, the patient suddenly became cyanotic and died. Pulmonary embolism was suspected, and calf measurements at this time showed the right calf to be 1 cm. larger in circumference than the left. An autopsy was obtained.

Fig. 4 (case 2).—Tomograph-bronchogram at depth of 13 cm. from anterior chest wall showing the right hilar mass sitting on the lower stem bronchus at about the origin of the middle lobe bronchus.

Pathology.—The resected surgical specimen (lateral segment of middle lobe) showed thrombosis of the pulmonary vessels with organization and pulmonary infarction. At autopsy, with the chest open, the operative site was clean and the bronchial stump intact. A small amount of fluid was present. With the pulmonary

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arterial tree collapsed, no aneurysmal dilatation could be demonstrated. A laminated clot 8 cm. in length and 0.5 cm. in diameter was found in the artery to the right upper lobe. It did not conform to the contour of the artery and was not adherent to the wall. The left lower lobe was atelectatic. The right deep calf veins were thrombosed. No other remarkable findings were present.

Microscopically, sections taken through the pulmonary artery at the area described as being dilated at operation showed this to be perfectly normal with no destruction of the elastic material. The lungs showed generalized edema and congestion. The right deep calf veins contained a laminated organized clot. Marked generalized arteriosclerosis was present. The final anatomic diagnosis was pulmonary infarction (lateral segment, right middle lobe) preoperative; pulmonary embolism (right upper lobe); and phlebothrombosis, right deep calf veins.

This case illustrates another atypical roentgen manifestation of infarction, namely, a hilar mass (apparent) with distal atelectasis. This picture obviously is also very strongly suggestive of tumor. Occlusion of a branch of the pulmonary artery effects a collapse of the alveoli in the area of the infarct. A large infarct, therefore, may cause sufficient diminution in the volume of a lobe to simulate the collapse caused by an endobronchial neoplasm.

In this case the infarct was due to embolism from the so-called bland or quiet venous thrombosis of the lower extremity. This is the usual source.[7] Although the femoral thrombosis should in most instances be diagnosed, it is often a treacherously unobtrusive condition. It may present few or no external signs, especially when the leg is not in use. It may be asymptomatic and go unnoticed by the patient and undiagnosed by the physician.[8]

The apparent hilar mass was a localized dilatation of the pulmonary artery that was very striking at operation but not present at autopsy. This phenomenon in association with infarction has been discussed by several authors.[9] Its cause is not clear, but it may be due to increased resistance to blood flow owing to the embolus.[10] In our case, in the absence of microscopic destruction of the layers of the vessel wall, it cannot be classified as a true pulmonary aneurysm, of which only 147 cases were reported up to 1947.[11] The so-called idiopathic dilatation of the pulmonary artery, unassociated with infarction, is also not infrequently seen. Mass survey films have uncovered many cases of this sort, and they are being referred to surgical centers most frequently with a diagnosis of tuberculous hilar lymphadenitis or bronchogenic carcinoma.[12]

COMMENT

Pulmonary infarction may closely simulate other forms of pulmonary disease.[12] Especially is this so when symptoms occur in an otherwise well person without a history of illness, operation, or injury, for one-third of all infarcts occur in patients of this type. Most of the clinical signs and symptoms of an infarct are also present in carcinoma of the lung, and examples of infarct diagnosed as carcinoma have been reported.[13]

From the roentgenographic standpoint, infarction may mimic almost any other lung disease. K. S. Smith,[14] in 1938, stated that the shadows due to infarcts fall into six groups: hazy horizontal clouding at the base, shadows suggesting pleural effusion, shadows of roughly circular form, density of one part of a lobe with cavity formation, appearance of basal collapse of a lobe, and dense linear shadows. There is no characteristic site, size, or shape of an infarct,[13] although it does have a predilection for the lower lobes, especially the right. The shape often depends on the shape of that part of the lobe occupied by the infarct. When the shape is round, it is usually so in only one projection and will vary in other projections. The early idea that all infarcts were triangular, with the base lateral, has been disproved.[15]

It is suggested, then, that prior to exploration of a suspicious lung lesion, deliberate consideration be given to the diagnosis of infarct. History and physical examination should routinely include attention to the lower extremities, the heart, and other sources of emboli. The roentgenograms should be critically reviewed. Finally, increased use of angiocardiography should prove effective in making the diagnosis clearer in many cases.[16]

SUMMARY AND CONCLUSIONS

Suspicious and unexplained lung lesions should be subjected to prompt thoracotomy in most instances. Two cases are reported in which pulmonary infarction was found when the preoperative impression was probable malignant disease. The possibility of infarct should be kept in mind when handling routine, unexplained, silent lung lesions.

465 S. Hawthorne Ave. (Dr. Perkins).

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16b. Footnote 4a.

Body Temperature.—Most protoplasmic activities, being chemical in nature, are speeded up by a rise in temperature and slowed down by its fall. Our bodies have a thermostatic mechanism which keeps the internal temperature fairly constant, but it can and does fluctuate normally within a range of one or two degrees; the neat and precise marking of 98.6 degrees Fahrenheit as the "normal" temperature on the ordinary clinical thermometer is rather meaningless. Our temperature regularly goes up and down each day on a fairly smooth, wave-like curve, with a peak or plateau in the middle of the waking period and a minimum at night during sleep. This diurnal temperature variation is not present at birth. It is acquired by each of us in the process of acculturation during the first year of life and thereafter is reinforced by our daily cycle of activities.

Our body temperature is about the same just before we go to bed at night as when we rise in the morning which explains why there is no difference in efficiency of performance. During prolonged deprivation of sleep, the subject's alertness in each 24 hours waxes and wanes with the rise and fall of the temperature curves, his greatest sleepiness coinciding with the temperature trough in the wee morning hours.—N. Kleitman, M.D., Sleep, *Scientific American*, November, 1952.

HISTOPLASMOSIS OF THE CENTRAL NERVOUS SYSTEM

Dale M. Schulz, M.D., Indianapolis

The conspicuous lesions of histoplasmosis are in the reticuloendothelial system, thereby focusing attention on the liver, spleen, lymph nodes, and lung. The central nervous system usually has been described only incidentally in reported cases. A recent review of 120 cases of histoplasmosis [1] in which autopsy was performed showed that in 12 cases there were lesions or organisms in the brain or meninges. Three of the patients were children 2 years old or less; nine were adults. The brain alone was involved in four cases, the meninges only in three, and both sites in five instances. In several of the reports,[2] the brain and meninges are merely mentioned along with other organs, and no indication of the extent of involvement is given. In the cases described by Kemper and Bloom [3] and by Dublin, Culbertson, and Friedman [4] a "few organisms" were seen in the adventitia of vessels in the brain and meninges and in the meninges only, respectively. There is no evidence that meningitis existed. The lesions in the brain in the case reported by Wood and Moore [5] are called "granulomas" without further description. Curtis and Grekin [6] refer to "miliary lesions" in the brain and capsule of the pituitary. Seabury and Drygas [7] described the case of a 30-year-old woman with both histoplasmosis and tuberculosis, in whose brain a single lesion was found containing organisms "indistinguishable from Histoplasma."

The only case of actual meningitis attributed to Histoplasma is that reported by Duarte.[8] This case is unusual in that the lesions were found only in the Peyer's patches of the ileum and in the leptomeninges and brain. The meninges, especially at the base, contained a fibrinopurulent exudate. Microscopically, the meningeal exudate contained much fibrin, many polymorphonuclear leukocytes, and an increased number of macrophages. Within the latter as well as in the leukocytes were small numbers of organisms identified as Histoplasma. There were also perivascular infiltrations in the brain substance. Some hesitancy in accepting this case as one of Histoplasma meningitis is justified by (1) the unusual distribution of lesions, (2) the violent acute inflammatory reaction in the presence of relatively few organisms, (3) the absence of the typical large macrophages packed with organisms, and (4) the appearance of the organisms themselves, as seen in the illustrations, where they tend to be oval or piriform. Furthermore, the ease with which Histoplasma may be confused with Toxoplasma in tissue sections has been pointed out by Meleney.[9] There is, then, no adequate description of central nervous system lesions in otherwise typical cases of histoplasmosis. Two previously unpublished cases from the autopsy files of the pathology department of the Indiana University School of Medicine, in which there were lesions in the central nervous system, are reported below.

REPORT OF CASES

CASE 1.—The patient was a 14-year-old white boy whose illness began in November, 1949, with fever, abdominal cramps, and vomiting. He was hospitalized in December because of continued fever and dizziness. Physical examination revealed moderate enlargement of submandibular lymph nodes, Babinski and Chaddock signs of the left lower extremity, generalized pallor, and lethargy. Urine and blood examinations on admission gave results within normal limits, although later the white blood cell count rose to 20,000, with a marked shift to the left. A roentgenogram of the chest showed miliary densities throughout both lung fields, which were regarded as compatible with either tuberculosis or a fungus infection. Tuberculin and histoplasmin skin tests were negative. An examination shortly after admission revealed that the spinal fluid was not unusual except for a trace of globulin. During the first week, undiluted blood serum gave a positive histoplasmin complement fixation test, while one month later the test was positive with 1:64 dilution. Bone marrow biopsy revealed a few macrophages filled with Histoplasma capsulatum. Cultures of bone marrow, blood, and sputum were negative. The patient became progressively more stuporous and died in coma on the 60th hospital day, three months after onset of symptoms.

The gross findings at autopsy were, in general, those seen in most cases of disseminated histoplasmosis. All groups of lymph nodes were enlarged, the liver weighed 1,420 gm. (normal weight, 1,180 gm.), and the spleen weighed 340 gm. (normal weight, 70 gm.). The spleen showed numerous 1 to 2 mm., pale, yellowish nodules throughout. The omentum and all the peritoneal surfaces were studded by small yellowish-gray nodules. The kidneys and the vertebral bone marrow showed small, irregular, gray areas. The adrenal glands contained nodules of caseous necrosis. In the mucosa of the jejunum, ileum, and proximal colon, there were a number of raised, often ulcerated areas, measuring 2 to 4 mm. in diameter. The right pleural cavity contained 75 ml. of clear fluid. The lungs were heavy and subcrepitant, and the pleural surfaces were covered by yellowish-gray nodules as large as 5 mm. in diameter. Similar nodules were seen throughout all the lobes. The hilar lymph nodes were greatly enlarged and caseous. The epicardium contained similar, though smaller, nodules, and a few nodules were found beneath the endocardium of both ventricles. The convolutions of the brain were flattened slightly. The leptomeninges were normal in gross appearance except at the base, especially in the interpeduncular cistern, where they were cloudy and more opaque than usual. Nothing remarkable was seen on sectioning the brain.

Microscopic examination showed isolated and confluent granulomas with caseous centers surrounded by epithelioid cells, organism-filled macrophages, and giant cells. These granulomas were found in the lungs, myocardium, kidneys, liver, spleen, bone marrow, lymph nodes, thyroid and adrenal glands, Peyer's patches of the ileum, lymphoid follicles of the colon, and pancreas, and in patches of organizing exudate on the pleural surfaces. There was generalized hyperplasia of the reticuloendothelial tissue, which contained great numbers of organisms. No lesions were found in the esophagus, stomach, ureter, testis, urinary bladder, or prostate.

From the Department of Pathology, Indiana University School of Medicine.

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In several sections of brain taken from different portions of the cerebrum, the overlying leptomeninges contained an increased number of mononuclear cells as well as a few polymorphonuclear leukocytes. In sections of the brain stem and base of the brain, however, the inflammatory reaction was marked and was principally perivascular in distribution. The vessel walls were, in general, intact, with a cuff, often eccentrically arranged, of granuloma made up of large macrophages packed with organisms, mononuclear cells, epithelioid cells, and a few polymorphonuclear leukocytes (fig. 1 and 2). In some places there were foci of necrosis, but no giant cells were seen. Some of the arteries showed endothelial proliferation. The parenchyma of the brain itself showed no abnormalities except for one focal lesion in the mesencephalon near the aqueduct of Sylvius at the level of the inferior colliculus. This lesion was composed of organism-bearing macrophages immediately surrounding a small vessel. These cells were in turn surrounded by mononuclear and epithelioid cells.

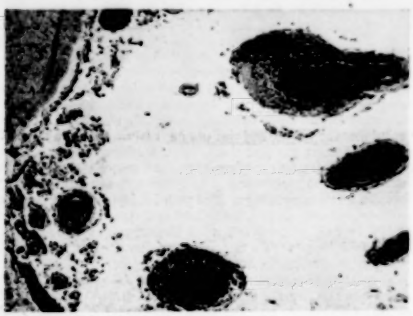

Fig. 1 (case 1).—Meningeal vessels near the brain stem with perivascular inflammatory reaction (× 42.4).

Case 2.—The patient was a 2-year-old boy who was brought to the hospital in December, 1930, because of a chronic ulcer on the leg of four months' duration. The mother was unable to give an adequate history. The most striking feature on physical examination was marked obesity, especially about the face, neck, and shoulders. The abdomen was distended, and the liver and spleen were palpable. Results of blood and urine examination were not unusual. During the next two weeks many ecchymoses developed and an ulcerated area appeared on the abdomen. The child died on the 15th hospital day. Since, in 1930, only a few cases of histoplasmosis had been reported, the case was not studied from that standpoint.

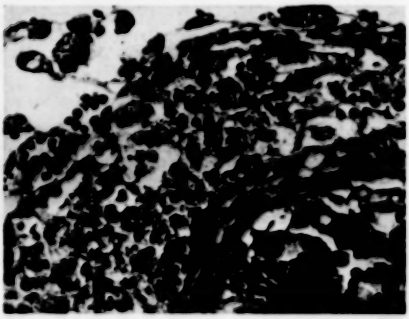

Fig. 2 (case 1).—One of the vessels in figure 1, seen at higher power, showing organism-filled macrophages as well as intimal proliferation (× 339).

At autopsy, petechiae and ecchymoses were found in all of the serous surfaces. The liver weighed 520 gm. (normal weight, 390 gm.) and the spleen, 160 gm. (normal weight, 33 gm.). The mesenteric and retroperitoneal lymph nodes were enlarged, and the cut surfaces showed hemorrhages and foci of caseation. The mucosa of the intestine was not unusual. The kidneys and right adrenal gland were grossly normal, while the left adrenal was replaced by a roughly spherical, encapsulated mass measuring 6 cm. in diameter. This was identified microscopically as a neuroblastoma. The only metastases were in a few retroperitoneal nodes. The lungs contained a few scattered areas of consolidation. The hilar nodes were not enlarged. The brain and pituitary gland were grossly normal.

On review of the microscopic slides at a later date it was found that the lymph nodes, spleen, and liver contained large numbers of Histoplasma within macrophages. Well-defined granulomas were not seen, but rather there was a diffuse hyperplasia of reticuloendothelial cells. Smaller numbers of organisms were seen in the lung, kidney, at the edges of the leg ulcer, and in the tumor mass. Only two sections of brain were available, and neither showed lesions nor organisms in the brain substance or meninges. In a section of the pituitary gland, however, there were several foci made up of macrophages filled with organisms, mononuclear cells, and a few polymorphonuclear leukocytes in the pituitary capsule and the dura covering the bone of the sella. In some instances, these collections were in the lumens of thin-walled vascular channels, but in other places they appeared to be in the fibrous tissue. In still other foci the organisms were free in the tissue and not engulfed by macrophages (fig. 3). The pituitary gland itself contained only occasional, organism-filled cells in capillaries and was otherwise not unusual, the cell types occurring in their usual proportion.

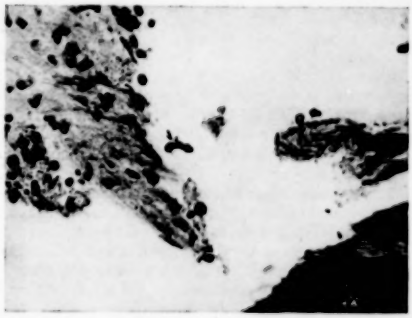

Fig. 3 (case 2).—The pituitary capsule with intracellular as well as extracellular organisms (× 339).

COMMENT

The over-all percentage of patients with central nervous system involvement (12 in 120 cases) is 10%. Of the eight patients included from this institution, two had central nervous system lesions, an incidence of 25%. If these cases are removed from the main series 10 cases are left out of a total of 112, or an incidence of only 8.4%. This disparity suggests that histoplasmosis may invade the central nervous system more frequently than has been generally supposed, if a careful search is made for it.

The clinical significance is difficult to evaluate until more data are collected. In the first case reported here, the patient had definite neurological symptoms: Babinski and Chaddock signs and progressive lethargy ending in coma. The case was not, of course, studied from a neuro-

logical point of view. The second case is interesting because of the "buffalo" type of obesity and the fact that the only lesions found within the cranial cavity were in the dura about the pituitary gland and sella. Unfortunately, only one slide of pituitary tissue is available, and it shows no lesions of the gland itself.

In several of the cases in the literature and in the first case reported here, the inflammation was confined to or most marked at the base of the brain, as in tuberculous meningitis. The perivascular distribution of the granulomatous reaction is also reminiscent of tuberculosis and emphasizes another point of similarity between these two diseases.

SUMMARY

Involvement of the central nervous system in cases of generalized histoplasmosis is apparently relatively infrequent, occurring in 10% of 120 cases reviewed. Two cases are described, and the similarity between Histoplasma meningitis and tuberculous meningitis is pointed out. In both diseases, the process is most pronounced at the base of the brain, and the granulomatous reaction is similar microscopically. It is suggested that histoplasmosis invades the central nervous system more frequently than is generally supposed and may be detected, perhaps even clinically, if a specific search is made for it.

1040-1232 W. Michigan St. (7).

SUBACUTE NONSUPPURATIVE THYROIDITIS TREATED WITH CORTISONE

Dwight E. Clark, M.D., Thomas S. Nelsen, M.D.
and
Robert J. Raiman, M.D., Chicago

Subacute nonsuppurative thyroiditis is a self-limited inflammatory disease of a previously normal thyroid that results in an enlarged, firm, tender gland. Virus and bacterial infections and an allergic reaction have all been postulated as etiological agents. These cases are consistently without suppuration, and bacteria have never been demonstrated in affected glands. Although unproved, the frequency with which patients with this disorder give a history of preceding acute upper respiratory infection and other evidence suggests to most authors that virus infection constitutes the basic etiology. Most patients with subacute nonsuppurative thyroiditis complain of malaise, weakness, and exquisite neck pain, which occasionally begins in one lobe and then migrates across the rest of the gland. Examination reveals an enlarged, hard, tender thyroid gland. Many such patients show low grade fever and an elevated erythrocyte sedimentation rate. Others occasionally reveal lymphocytosis, mild hypermetabolism, and tachycardia. The disease is commonest in middle-aged women. Histologically the glands reveal marked cellular infiltration with lymphocytes, polymorphonuclear leukocytes, histiocytes, and plasma cells. Foreign body giant cells are also seen. There is decreased colloid in the follicles, and varying degrees of fibrosis are present. Therapeutic agents that have been used include iodides, surgery, antibiotics, methimazole ("tapazole"), thiouracil and its derivatives, and x-ray. Iodides and antibiotics are ineffective; thyroidectomy produces satisfactory remission but is certainly not indicated in this disease. Thiourea derivatives and x-ray have proved the most efficacious of these agents, but neither has been completely successful. Because cortisone had been beneficial in some nonspecific inflammatory processes, it was accordingly given a therapeutic trial in three cases of subacute nonsuppurative thyroiditis.

REPORT OF CASES

CASE 1.—A 39-year-old white woman was admitted to the University of Chicago Clinics, Feb. 2, 1952. About eight weeks prior to admission, a sore throat developed, and the patient was treated unsuccessfully with salt water gargle and cough drops. Shortly after the onset of the sore throat, the lower anterior neck became tender and painful on movement. Six weeks before admission she had noted a lump in the region of her thyroid. In addition, there was general malaise and easy fatigability. She had night sweats and had lost 15 lb. (6,803 gm.) in weight. The patient had been treated with penicillin, chloramphenicol (chloromycetin®), and oxytetracycline ("terramycin") without any benefit. The pain, tenderness, and malaise continued. Past history was noncontributory.

Physical examination revealed a well-developed, well-nourished woman in no acute distress; however, her neck was notably stiff and she moved it slowly. There was some stare to her eyes. The thyroid gland was enlarged, quite firm, especially on the right, and moderately tender. It was estimated that the thyroid gland was about twice normal size. There were no palpable lymph nodes. Blood counts and urinalysis were normal; the basal metabolic rate was +15. Indirect laryngoscopy revealed no intralaryngeal pathology. A diagnosis of subacute nonsuppurative thyroiditis was made. On the sixth hospital day, she was started on 25 mg. of cortisone daily. Within 24 hours after starting the cortisone, the patient felt generally improved. In 48 hours the tenderness in her neck was diminished and she was able to move her head with much less discomfort. By the seventh day of cortisone therapy, the tenderness had completely disappeared and the thyroid gland was just palpable and was of about normal consistency. She was continued on cortisone for another 7 days, making a total of 14 days of therapy. At this time the symptoms referable to her neck had completely subsided and the gland was barely palpable. Four weeks after beginning cortisone therapy, the consistency of the gland was normal and she felt perfectly well. There has been no recurrence.

CASE 2.—A 42-year-old white housewife was first seen at the University of Chicago Clinics, June 26, 1952, because of swelling and pain in the anterior lower neck of seven weeks' duration. The patient had first noticed pain and tenderness on palpation in the region of the right lobe of the thyroid. Over a period of one week, the pain and tenderness spread to the region of the left lobe of the thyroid. Both she and her husband noticed a tender swelling in her lower anterior neck. Movement of the neck was quite painful, as was swallowing and sneezing. Hot packs did not alleviate the condition. The pain and tenderness continued, and the mass became harder. During this period, a nonproductive

From the Department of Surgery of the University of Chicago.

cough, anorexia, and general malaise developed. She lost 10 lb. (4,535 gm.) in weight. The patient stated that she had had a severe conjunctivitis two weeks before the pain in the region of the thyroid developed. There had been no known thyroid enlargement prior to onset of this illness.

Physical examination was essentially negative, except that the thyroid was diffusely enlarged, quite firm, and very tender to palpation. The right lobe was larger than the left and was harder. A diagnosis of subacute nonsuppurative thyroiditis was made, and she was started on cortisone, 25 mg. every day, with instructions to continue the medication for 14 days. When seen at the end of the two week period she stated that she had noted a marked improvement by the second day of medication and by the third day she thought the thyroid gland was smaller and softer. The tenderness gradually disappeared, and at the time of this visit the gland was much smaller and soft and there was no tenderness or pain. The gland continued to decrease in size and, two months later, was just palpable. She has remained well to date.

CASE 3.—A 40-year-old white man was first seen on July 24, 1952. Some four and a half weeks prior to this, he had had a cold, and, three or four days later, pain and swelling developed in the lower anterior neck. Initially, the tenderness was on the right and then shifted to the left. Movement of the neck became quite painful. A low grade fever, general malaise, and anorexia developed. Three weeks before he was seen, he consulted his local physician who found an elevated white blood cell count and erythrocyte sedimentation rate. The entire thyroid, particularly the right lobe, was tender and quite firm. He was started on aureomycin, which did not benefit him significantly. At the time he was first seen at the University of Chicago Clinics, the left lobe of his thyroid was about twice normal size and was extremely hard and tender. The right lobe was slightly enlarged, firmer than normal, and slightly tender. He stated that he had never been aware of an enlarged thyroid prior to this illness. A diagnosis of subacute nonsuppurative thyroiditis was made. He was given 25 mg. of cortisone every day for 12 days. Within 24 hours he felt much better and the tenderness in his neck began to subside. The pain had completely disappeared after four days of cortisone therapy. Following discontinuance of the cortisone, he had some letdown in his feeling of well-being but the pain in his neck did not return. When seen on Oct. 23, 1952, the thyroid was not palpable and there was no tenderness in the neck. He felt fine.

COMMENT

The three cases reported, which were clinically diagnosed as subacute nonsuppurative thyroiditis, were successfully treated with cortisone. A single daily dose of 25 mg. was given for a total of 12 to 14 days. Marked relief of both local and systemic symptoms was apparent within 24 hours. The pain and tenderness had completely disappeared in from four to seven days. Within the first week of therapy the glands had decreased in size and became softer. In all cases the thyroid gland had returned to normal size and consistency within two months. There have been no recurrences.

King and Rosellini,[1] in 1945, introduced thiouracil as a therapeutic agent for subacute thyroiditis. In their initial series of 10 cases, 8 responded well to thiouracil therapy in seven days, 2 failed to respond, and 1 of the 8 thought cured suffered a relapse after one week but responded to further thiouracil therapy. Others [2] have reported similar results with propylthiouracil and methimazole therapy. The only disadvantages to thiouracil therapy are the moderate delay before relief is obtained, occasional drug intolerance, and the slight chance of inducing agranulocytosis.

X-ray, which is an older form of therapy than thiouracil and probably the most commonly employed form of treatment, also gives generally good results. Osmond and Portmann [3] report on 55 cases of subacute thyroiditis treated with x-ray. Forty were cured after one course of from 400 r to 600 r. Of the remainder, eight were not followed, six required a second course of treatment, and one had a recurrence. Allen and Reeves [4] reported 15 cases of subacute thyroiditis treated with 500 r to 1,000 r and noted a 27% recurrence rate. All cases averaged about a two week interval before gaining subjective relief from symptoms. The disadvantages of x-ray therapy are the number of visits to the therapist required, the cost of treatment, the delay in relief of symptoms, and the relatively high recurrence rate.

Cortisone, which is presented as another mode of therapy, has the advantages of prompt and dramatic relief of symptoms, ease of administration, and, in the dosage levels and duration of treatment found necessary, the absence of any side-reactions. In this short series of three cases, no recurrence has been noted. In view of these facts, we feel justified in recommending the use of cortisone as an agent useful in the treatment of subacute nonsuppurative thyroiditis.

SUMMARY

Three patients with subacute nonsuppurative thyroiditis successfully treated with cortisone are reported on.

950 E. 59th St. (Dr. Clark).

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Advice to the Neurotic.—The neurotic has sufficient insight into his difficulties to realize that some sort of change is necessary in order for him to feel more comfortable. He will, almost inevitably, try to change something in his environment, however, rather than something in himself. The physician can easily be convinced, when hearing the patient's complaints about job, school, husband, wife, neighbors, etc., that changing the environment would be a reasonable solution. This approach loses sight of the fact, however, that the patient himself has played a major role in causing things to reach the point where they seem so disagreeable. In other words, the physician's attention needs to be focused on the patient's own responsibility for the troubles he gets into, rather than on the justification of the patient's complaints. The physician who assumes the responsibility of recommending a change of job, change of marital partner, change of home, etc., as a solution to the patient's difficulties may be getting himself into more trouble than he realizes unless he has taken into very serious consideration the role the patient himself plays in his own difficulties.—C. E. Goshen, M.D., Practical Psychotherapy in General Practice, *New York State Journal of Medicine*, Oct. 1, 1952.

COOPERATION BETWEEN PRACTITIONERS OF MEDICINE AND PUBLIC HEALTH OFFICERS

Thomas P. Murdock, M.D., Meriden, Conn.

First, let me say that I am grateful for the invitation to give this address and for the opportunity of discussing some of the common problems of practitioners of medicine and public health officers. I must say, at this time, that any statements I make are my own and must not be considered as statements coming from the American Medical Association or its Board of Trustees.

During almost half a century of medical practice, and I might add, without being egotistical, a large practice, I have come to know some of the common problems of medical practitioners and public health officers on the local level. In recent years, through contacts and associations with other groups in the healing arts on state and national levels, I have come to see the problem on a much wider plane. The interesting thing about this broad viewpoint is that the same basic problems seem to exist. The same basic mistakes seem to be made on both sides. The same careless statements seem to be made.

We know, and it is basically sound, that there is never a result without a cause, even though in the sciences that cause is sometimes found very late and sometimes not for centuries. One asks, what are the causes of some of these basic mistakes and careless statements?

My personal contacts with public health officers go back to the beginning of the second decade of this century. Their functions and duties in that era were concerned almost entirely with contagious and infectious diseases and with sanitation. The chief duty of the public health officer in this period was largely that of quarantine officer. Only the larger cities had full-time health officers and health departments. The chief duty of the public health officer now remains the same as at that time, namely, the protection of the health of the people.

Since then, a great change in the functions of the public health officer has taken place. The field now covers many of the long-duration illnesses, such as rheumatic fever, chronic arthritis, cancer, syphilis, and diabetes, and care of crippled children and the blind. One could also ask at this point, how did this change come about? What are some of the reasons for the change? Is this change healthy and sound? Are there any dangers in this change? Long-duration illness is never dramatic; termination by death is frequently prayed for by relatives and friends. It is trying on both the patients and relatives, and it is expensive. The results are often bad. On the other hand, acute surgical conditions are frequently of short duration; the drama of the operating room, of anesthesia, of surgical specimens is present. It gives the patient something to talk about at drawing room parties for months to come; whereas with long-duration illness, the commonest drawing room statement is, "It is a pity he can't die."

The philosophy of the American people is changing and has changed considerably in the last two decades. A close observer will notice that there is an unwillingness on the part of children to assume their responsibilities in the care of parents or relatives. They seem to feel that they have done their full duty when they have placed these unfortunate sick and elderly persons in homes for the infirm and aged, frequently at the expense of others.

When federal funds are to be channeled into the states, it is done frequently through state health departments as established units of government. How did this come about? I think the answer is clear. On the national level, we have the United States Public Health Service. This was, and is, a fixed unit of the federal government and actually is the chief organization concerned with civilian health. On the state level, we have a similar situation with state health departments, which are fixed units of state government and, again, are the chief, if not the only, ones concerned with civilian health. Few states have medical care authorities. It is natural, therefore, that federal bills should endow the Untied States Public Health Service with this power and that, in turn, the state health departments would function similarly on the state level. This change could be accepted as healthy and sound if both groups focused their attention on one basic danger. The function of the practitioner is the care of individual sick persons, and the function of the public health officer is the prevention of illness in the community. If either function is usurped, trouble develops.

I know that the Association of State and Territorial Health Officers, as such, has been in existence since 1912, and I know that meetings with the United States Public Health Service have been going on for a longer period. That is good for public health officers and for public health. I can say at this point that America is fortunate, the public health service is fortunate, and public health officers are fortunate in the selection of Leonard Scheele as the Surgeon General of the United States Public Health Service. I am sure that the annual meetings of state health officers, with the exchange of ideas, discussion of the different state sanitary codes, and explanations of the different departments in the various state health departments are productive of great good. I think I detect one weakness. Is any attempt being made to bring this information down to the subordinates in the state health departments or to the municipal health officers? Unless this is done, some of this effort probably is being wasted.

It is difficult for the uninitiated to recall the differences between the various public health organizations. These are the United States Public Health Service, the American Public Health Association, the Association of State and Territorial Health Officers, the Association of Schools of Public Health, and the National Organization for Public Health Nursing. There probably are others, and I am told that another public health organization is in the making. Are these separate organizations necessary? I realize that it would probably be difficult to unite them because of their different purposes. Is there liaison between them? I think this is important.

Read before the meeting of the Association of State and Territorial Health Officers, Dec. 10, 1952, Washington, D. C.

We could all take advice and guidance from the recent action of the various nurses organizations. Formerly, there were six rather large groups. In the recent reorganization, they were combined into two great organizations: (1) the American Nurses Association, with membership made up of individual nurses, and (2) the National League of Nursing, which is subdivided into (*a*) the National League of Nursing Education and the National Organization for Public Health Nursing and (*b*) Hospital Nursing.

The Commission on Chronic Illness has been reorganized. This organization was founded jointly by the American Hospital, the American Medical Association, the American Public Health Association, and the American Public Welfare Association. It is being financed by several organizations, many of which are concerned with chronic illness. This commission got off to a bad start about three years ago because of limited funds, a director loaned for only a year, insecure policy, and lack of direction, stimulation, and drive. It is going well now. The director is Dr. Dean Roberts, formerly with the Maryland State Health Department. An urban study is being conducted in Baltimore, and this work is to be finished within five years, possibly within three. A suburban study is being carried on in Hunterden County, N. J. The Chronic Illness Commission is acting in an advisory capacity in the New Jersey study. It is my belief that much valuable information will come from both studies. A survey of nursing homes is to be done within the next year by the Commission on Chronic Illness. Here, I think, is a place where the state health departments can be of great help. Also, a conference on the care of the chronically ill is to come up during the next year, another place where public health organizations can help.

The National Health Council has just come up with a report of the program development committee. This is to be a continuing committee with recommendations for changes or improvement as conditions warrant. My thought of the chief function of the National Health Council is that it should be the great coordinator of the functions of the various member organizations. Owing to lack of funds, it has been forced to limit its program.

The Inter-Association Committee on Health is made up of representatives of the American Hospital Association, the American Medical Association, the American Dental Association, the American Public Welfare Association, the American Public Health Association, and the American Nurses Association. The representatives are officers of the various parent organizations. The chief purpose of this organization is to try to resolve the problems common to all. It is the feeling of some, and to this I subscribe, that this organization is not workable or practical.

I believe there are now 11 schools of public health in this country. One closed recently, and I am told that another is about to do so. The public health schools now in existence have less than 1,000 students. The schools are having the same financial difficulties that all medical schools have. It is my feeling that ways and means must be found, on a voluntary basis, to relieve the financial situation and to stimulate enrollment.

Are there differences of opinion between public health officials and practitioners of medicine? Have tensions developed between the two groups? Are there criticisms from both sides? Have there been careless statements made on both sides? Can these differences and tensions be resolved? My answer is yes to each of these questions, especially so for the last one.

I think it is fair to say that these differences begin with the fact that one group has chosen to enter full-time government service, whereas the other group has chosen the way of caring for the individual sick or injured persons on an individual basis or group basis. This immediately poses not an immediate change in philosophy but a difference in procedure. The full-time worker, viewing it from a material standpoint, has a regular salary, with gradual increases and a retirement fund. It is true, probably, that his income is not as great as the practitioner's income. The practitioner, on the other hand, gambles on the question of his ability to prove to individual persons that he is a well-equipped physician and is deserving of their patronage. During this period, their thinking becomes widely separated and their social viewpoints differ. It is here that a change in philosophy takes place. At this point it would be well for both to remember that their duties are the same, namely, the care of the sick and the prevention of illness. Perhaps you may have wondered why I have devoted so much time to the question of chronic illness in relation to public health officers and practitioners of medicine. This, too, I think, is one of the important causes of the differences of opinion.

Are practitioners of medicine familiar with the problems of the state and territorial health officers? Are the health officers familiar with the problems of the practitioners? My answer to these questions is no. It has often occurred to me that this would be a sad country without efficient state health departments. By the same token, it would be equally sad without efficient practitioners of medicine.

I can say with certainty that, during 40 years of practice, I have never known one person to be denied adequate medical care. All patients are entitled to medical care, and American practitioners will see that they get it. This will be done on a private contractual basis between the physician and the patient or willingly without fee where the need can be shown. This latter must be watched and guided, however, because it is fraught with danger if done unnecessarily or unwisely. Then it is only a short step to socialism. We all have seen the results of fascistic medicine in Germany and communistic medicine in Russia. What the future holds for England, God alone knows, but the most optimistic are sad. Thus, we have, as the crucial factors in the problem, chronic illness and cases in which the need can be shown. To these, of course, must be added a difference in procedure in practice and, later, a change in philosophy between the practitioners and the full-time state officers.

I have heard it said that in the various public health organizations there are minority groups who are "left of center" in social philosophy and that these groups are very vocal; their attitudes and actions are responsible for the labeling of all public health organizations as left of center. This is unfortunate. I think I can say that the large majority of practitioners do not subscribe to this point of view. The American Medical Association, in its statement of policies, has endorsed public health services to

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the end that all areas would profit by them. At the same time, I need not tell you of the accusations made and attacks against the American Medical Association. You are all familiar with these.

I am opposed to compulsory nationalized medicine. I am a firm believer in the voluntary insurance way, on a state level. The question of compulsory nationalized medicine would be the place, I am sure, where the socializers would attempt to divide us. This is what occurred in Great Britain when the general practitioners and the specialists were divided. It must not occur in the United States. What can be done to correct this situation, if such a situation exists? I think we ought to face the fact that it does exist and not bandy words about it but attempt to correct it.

I think there are those among both public health officers and practitioners of medicine who have been intolerant. I think, however, that the promoters of these intolerances have been and are in the minority and that the great majority in both groups are anxious and willing to see the viewpoints of the other group. Intolerances, whether they be on a racial, religious, or professional basis, have no place in American life. It would be splendid, I think, if each group recognized and understood the legal and moral responsibilities of the other. It would be to the advantage of both if the practitioner of medicine had experience and work with a health department. By the same token, it would be equally advantageous if health department officials had experience in general practice before going into public health service. Obviously, the work of a local or state health department would be nullified without the cooperation of the practitioners. At the same time, there are many things a state health department can do for the practitioner and the practitioner's patients.

The American Medical Association recognizes the necessity of the various specialties for their own sections at its scientific meetings. It also recognizes the necessity of special associations or organizations not only for the good of the organizations but also for the good of the public in the care of the sick and the prevention of illness. It also recognizes its responsibility to ethically guide its members as does the church in its guidance of its children.

I think it would be a wise move on the part of the State and Territorial Health Officers Association to arrange specific liaison with the American Medical Association. The American Medical Association has a Section of Public Health and the State and Territorial Health Officers Association is well represented, but this would go far beyond that and, I am sure, could be accomplished. The common problems, and there are many of them, could be resolved in this way on the national level. In this way, the State and Territorial Health Officers Association would become more closely associated with its parent organization, or what I believe should be considered its parent organization. In following through with this program, I think it would be wise for those states not having state liaison committees for this purpose to arrange to have them. Most men are fair, understanding, willing to see the viewpoint of another, and tolerant. It is only the few who are not. When two groups sit around a table to discuss a controversial problem, almost invariably they will come up with the solution.

The State and Territorial Health Officers Association has had a long and successful life. It has made great contributions to life and to humanity. It must continue to do so. My sincere congratulations go out to this organization.

In conclusion may I say that I know of no organization, if it be not the church, whose basic principle is more fundamental, sincere, noble, and unselfish than is that of the American Medical Association. That basic principle is "to promote the science and the art of medicine and the betterment of public health." The State and Territorial Health Officers Association exists for the same purpose.

Professional Bldg.

CLINICAL NOTES

AGRANULOCYTOSIS FOLLOWING ADMINISTRATION OF PHENYLBUTAZONE (BUTAZOLIDIN®)

REPORT OF A CASE

John L. Stifel, M.D.
and
J. C. Burnheimer, M.D., Toledo, Ohio

Phenylbutazone (butazolidin®) was introduced in America in THE JOURNAL for June 21, 1952.[1] It seems to be of value in gout, in rheumatoid arthritis and a variety of rheumatoid disorders, and in psoriasis. It is important to remember that it is related chemically to aminopyrine (pyramidon®). In view of the fact that "among the 140 patients treated there was no instance of leukopenia," it seems important that the following unfortunate case should be reported promptly.

REPORT OF CASE

Rheumatoid arthritis developed in a 52-year-old white woman early in 1952. By May she was so badly disabled that cortisone was given in doses of 75 to 150 gm. daily, with only moderate improvement. On July 30 as moon facies had developed and the patient was almost completely bedridden, administration of phenylbutazone instead of cortisone was started. Her white blood cell count at this time was 8,750, with 68% segmented cells, 3% stab cells, 21% lymphocytes, 3% monocytes, 1% basophils, and 2% eosinophils. The hemoglobin level was 11 gm. per 100 cc. (Haden-Hausser). From then on she received no other medication except vitamin capsules and not over half a dozen phenobarbital tablets of 1 grain (60 mg.) each. She was given 200 mg. of phenylbutazone three times daily until Sept. 15.

Remarkable improvement began in two or three days. The patient became more and more active, walked about, did her housework, and felt better than she had for months; this improvement continued for six weeks.

After a week of phenylbutazone therapy the hemoglobin level was 11 gm., and the white blood cell count 11,550. A week later the hemoglobin level was 11.5 gm., and the white blood cell

From the Department of Medicine, Toledo, Hospital.

1. Kuzell, W. C.; Schaffarzick, R. W.; Brown, B., and Mankle, E. A.: Phenylbutazone (Butazolidin®) in Rheumatoid Arthritis and Gout, J. A. M. A. **149**: 729 (June 21) 1952.

count 9,200. Three weeks later the hemoglobin level was 12 gm., with 8,500 white blood cells.

On Sept. 15 the patient reported that she had had a painful and swollen throat for two days, with pain across the upper abdomen. Examination showed her temperature to be 101 F. The throat was edematous and red. The glands of the neck were swollen. The liver was palpable an inch below the costal margin and was quite tender. There was no jaundice. The white blood cell count was 2,550. This dropped the next morning to 1,650, with only 17% granulocytes.

In the next four days the white blood cell counts were 675, 600, 700, and 750. No granulocytes were found until the fourth day, when about 2% stab forms appeared. The red cell count remained about 3,580,000 and the hemoglobin level from 10 to 11.5 gm. Fortunately the thrombocyte count remained normal (580,000 to 288,000).

The liver increased rapidly in size until it was palpable 3 fingerbreadths below the costal margin. Curiously enough the results of a liver function test were not grossly abnormal. The icterus index was 8. The sulfobromophthalein (bromsulphalein®) test showed 23% retention in 30 minutes. The cephalin flocculation test was plus-minus in 48 hours.

The blood nonprotein nitrogen level was 31 mg. The total blood protein level was 6.2 gm. per 100 cc., with 3.45 gm. of albumin and 2.75 gm. of globulin.

The patient was treated from the start with large doses of penicillin to which oxytetracycline ("terramycin") was later added. She was given three blood transfusions and daily injections of vitamin B_{12}. Her temperature ranged from 102 to 104 F. At the suggestion of Dr. Frank Bethels, she was given 75 mg. of corticotropin (ACTH) on the second day of the complete agranulocytosis, although this seemed entirely irrational therapy when the defenses against infection were so badly damaged. In a few hours the temperature was normal, and the patient looked much better. A secondary rise of temperature 48 hours later responded in the same dramatic way.

The patient now seems to be recovering nicely. Her last white blood cell count was 7,200. The liver has decreased to normal size.

COMMENT

The difficulty in agranulocytosis is that there is no way to determine the patients in whom it will develop. It is certainly not a toxic reaction, but a hypersensitivity that takes some time to develop.

We may be criticized for having given the above patient 600 mg. of phenylbutazone daily for such a long time. A smaller dose would probably have caused the same reaction. One of us (J. L. S.) can recall a patient years ago in whom complete agranulocytosis developed after she had taken only two or three aminopyrine tablets. She had previously been sensitized.

Whether daily white blood cell counts would reveal hypersensivity early enough to prevent agranulocytosis is not known and would be very difficult to determine. Normal blood cell counts after a few weeks give a feeling of security that makes it difficult to continue them frequently. In this case administration of the drug was stopped when the count was not too low (2,400), but the alarming drop in granulocytes continued for four days.

SUMMARY AND CONCLUSION

A case of agranulocytosis following administration of phenylbutazone (butazolidin®) is reported. No toxic effect was detectable until after the drug had been taken for about six weeks. There was complete disappearance of granulocytes from the peripheral blood for five days. Corticotropin (ACTH) seemed to have a very beneficial effect on the condition. Phenylbutazone must be given with greatest caution.

232 Michigan St. (Dr. Stifel).

UNUSUAL REACTION FOLLOWING USE OF PHENYLBUTAZONE (BUTAZOLIDIN®)

REPORT OF A CASE

Richard Charet, M.D.
and
Irving Siegel, M.D., Brooklyn

Phenylbutazone (butazolidin®) is a drug widely used for relief of arthritis and allied disorders. It was first synthesized in 1948 and has received extensive clinical trial.[1] Its pharmacology was investigated by Wilhelmi,[1e] who showed that in laboratory animals it acted as a mild analgesic, a moderately powerful antihistaminic, an antiphlogistic, and an antipyretic. The drug is used chiefly by the oral route. The reported incidence of undesirable side reactions has varied from 25 to 33%, while in about 12% of cases the toxic manifestations made it necessary to discontinue the use of the drug.[2] Toxic reactions described have been edema, nausea and abdominal discomfort, reactivation of latent peptic ulcer, anemia, vertigo, and skin eruptions.[1d]

REPORT OF CASE

A 44-year-old white man was admitted to Prospect Heights Hospital on Sept. 5, 1952, with a history of chills, fever, malaise, sore throat, dysphagia, photophobia, blepharospasm, and a generalized eruption for two days. The dysphagia was so severe that he could not even swallow fluids. There was dysuria at the onset of urination. The past history was not significant. There was no history of any allergic disease. Three weeks prior to admission, the patient began to use phenylbutazone for treatment of lumbar spondylitis. No other medication was being administered. He took 0.2 gm. three times a day for four days (total of 2.4 gm.). There was moderate improvement in his joint pains. The dose was increased to 0.2 gm. four times a day for the next six days (total of 4.8 gm.). The patient was completely asymptomatic with this dosage. The dose was then reduced to 0.2 gm. three times a day. With no recurrence of any pain for three days, it was reduced to 0.2 gm. twice daily. Four days later, the patient became aware of a gritty feeling in his eyes and noticed that they were red. At this time his palms and soles were red and tender. Administration of the medication was discontinued (a total of 10.4 gm. of phenylbutazone had been used in 17 days). On the following day, the patient was hospitalized.

On admission, he appeared acutely ill. The temperature was 103.2 F, the pulse rate was 100, and the respiratory rate 22 per minute. The entire body was covered by an intense erythematous maculovesicular eruption. There was edema of the periorbital tissue. The conjunctiva was intensely red, and there was a thick purulent exudate. He had moderately severe trismus. The buccal mucous membrane, the tongue, and the posterior pharynx were red and covered by vesicles and shallow ulcerative lesions varying in diameter from 0.25 to 0.75 cm. (figure). He expectorated tenacious, creamy sputum. The submental, submaxillary, and anterior cervical nodes were enlarged and tender.

1. (*a*) Domenjoz, R.: Pharmacological Aspects of Phenylbutazone (Butazolidin T.M.), a New Antirheumatic, Federation Proc. **11**: 339, 1952. (*b*) Freyberg, R.; Kidd, E. C., and Boyce, K. C.: Studies of Butazolidin and Butapyrin in Patients with Rheumatic Diseases, read before the Annual Meeting of the American Rheumatism Association, Chicago, June 6, 1952. (*c*) Currie, J. P.: Treatment of Rheumatoid Arthritis with Butazolidine, Lancet **2**: 15, 1952. (*d*) Kuzell, W. C.; Schaffarzick, R. W.; Brown, B., and Mankle, E. A.: Phenylbutazone (Butazolidin) in Rheumatoid Arthritis and Gout, J. A. M. A. **149**: 729 (June 21) 1952. (*e*) Wilhelmi, G.: Ueber die pharmakologischen Eigenschaften von Irgapyrin, einem neuen Präparat aus der Pyrazolreihe, Schweiz med. Wchnschr. **79**: 577, 1949.

2. Smith, C. H., and Kunz, H. G.: Butazolidin in Rheumatoid Disorders: Preliminary Report, J. M. Soc. New Jersey **49**: 306, 1952. Steinbrocker, O., and others: Therapeutic Observations on Butazolidin (Phenylbutazone) in Some Arthritides and Related Conditions, read before the Annual Meeting of the American Rheumatism Association, Chicago, June 6, 1952. Kuzell.[1d]

The heart and lungs were normal. Blood pressure was 120 systolic and 80 diastolic. The abdomen was soft. The liver, spleen, and kidneys were not palpable. There were an area of erythema and a few small vesicles at the glans penis extending to the urethral meatus. Results of neurological examination were negative.

Laboratory studies revealed a red blood cell count of 4,550,000 and a hemoglobin level of 85% (Haden-Hausser). The thrombocyte count was normal. The white blood cell count was 15,600, with 81% neutrophils (2% band forms) and 19% lymphocytes. The erythrocyte sedimentation rate was 22 mm. per hour. The bleeding time was 4 minutes. The coagulation time was 3 minutes and 45 seconds. The blood sugar level was 114 mg. per 100 cc. The blood urea nitrogen level was 14.4 mg. per 100 cc. The total blood protein level was 6.96 mg., with 4.42 mg. of albumin and 2.54 mg. of globulin. The albumin-globulin ratio was 1.7:1. The result of the cephalin flocculation test was 3+. The prothrombin time was 14 seconds in the control and 15 seconds in the patient's blood. Urinalysis revealed no abnormality. A sulfobromophthalein (bromsulphalein®) liver function test performed on the 10th hospital day showed 0.5% retention of dye in 30 minutes. The result of the urea clearance test was normal.

Vesicles and ulcerations on the tongue and lips following ingestion of phenylbutazone.

Treatment initially was administration of 25 mg. of corticotropin (ACTH) intramuscularly every 6 hours, 600,000 units of procaine penicillin intramuscularly every 12 hours, and 3,000 ml. of 5% glucose daily in distilled water intravenously to which was added 1 gm. of aureomycin. Dressings wet with 2% boric acid were applied to the eyes. The ulcers in the mouth were painted with 1% aqueous gentian violet. The temperature subsided by the third day, and the patient remained afebrile. He was then able to swallow small amounts of liquids. The parental administration of fluids, aureomycin, and corticotropin was discontinued. The rash on the trunk began to fade at this time. On the 10th hospital day, the skin on the soles and palms began to desquamate en masse. The stomatitis cleared progressively, and the ulcers were healed by the 13th day. The vesicles on the lips began to break on the fifth day, leaving denuded purulent bases. These later became hemorrhagic and oozed constantly. They cleared slowly, but healing was complete by the 14th day. The patient continued to improve and was discharged on the 15th hospital day. Two weeks following discharge, the cephalin flocculation test was repeated, and a negative result was obtained.

COMMENT

It may be concluded that the general systemic reaction of chills, fever, and eruption of the skin, mucous membrane, and conjunctiva resulted from the use of phenylbutazone. The positive cephalin flocculation test and slight retention of dye at 30 minutes in the sulfobromophthalein liver function test suggest the possibility of a mild hepatitis.

Phenylbutazone is a valuable drug for the relief of arthritic pains. The early recognition of toxic reactions may be accomplished only by frequent examinations of the patient by his physician, as well as by periodic blood counts. At the first sign of any side reaction, use of the medication should be halted immediately and the patient observed for any progression of the complication.

SUMMARY

A reaction of chills, fever, and generalized eruption of skin, mucous membranes and conjunctiva following oral administration of phenylbutazone (butazolidin®) is reported. The patient recovered following administration of fluids intravenously, aureomycin, and corticotropin.

77 Eastern Parkway (Dr. Charet).

AGRANULOCYTOSIS FOLLOWING USE OF PHENYLBUTAZONE (BUTAZOLIDIN®)

REPORT OF A CASE

Edward Bershof, M.D.
and
Albert C. Oxman, M.D., Denver

Phenylbutazone (butazolidin®) has recently been released for general use. It is a pyrazole derivative and is related in its chemical structure to aminopyrine. Phenylbutazone has been used alone and together with aminopyrine, the latter combination known in this country as butapyrin.® Agranulocytosis developing from the use of aminopyrine is well known. The close chemical relationship of aminopyrine and phenylbutazone would suggest that the latter drug is also potentially capable of causing agranulocytosis. Many toxic effects from phenylbutazone have been described in the recent medical literature. Kuzell and co-workers [1] reported clinical toxicity in 47 of 140 patients treated with phenylbutazone and butapyrin.® In only 17 of these was it necessary to discontinue administration of the drug. There was no instance of leukopenia or agranulocytosis in their series. In a subsequent paper [2] they report four cases of agranulocytosis

1. Kuzell, W. C.; Schaffarzick, R. W.; Brown, B., and Mankle, E. A.: Phenylbutazone (Butazolidin®) in Rheumatoid Arthritis and Gout, J. A. M. A. 149: 729 (June 21) 1952.

2. Kuzell, W. C., and Schaffarzick, R. W.: Phenylbutazone (Butazolidin®), Bull. Rheum. Dis. 3: 3 (Nov.) 1952.

with no fatality. After recovery three of these patients were again given phenylbutazone without recurrence of agranulocytosis. Stephens and co-workers [3] reported on the use of phenylbutazone alone in 107 cases, with a 44% incidence of toxic effects. There were no instances of agranulocytosis or leukopenia in their series. Steinbrocker and co-workers [4] stated that "there have been no published reports of serious effects from these new drugs on the hematopoietic system of man or in the experimental animal as yet." They reported four cases of leukopenia from butapyrin* and none from phenylbutazone. In two of these the drug was stopped with a prompt rise in the white blood cell count. In the others the white blood cell count returned to normal while therapy was continued. We are reporting a case of agranulocytosis with recovery from the use of phenylbutazone.

REPORT OF CASE

A 68-year-old white woman had been under treatment for severe osteoarthritis of the knees and spine for many years. In September, 1952, she had an exacerbation of her spondylitis with severe back pain radiating to the right hip and aggravated by movement. After other measures for control of her symptoms had failed phenylbutazone therapy was begun. Administration of the drug was started on Oct. 13, 1952, in doses of 200 mg. three times daily after meals. She was advised to return weekly for blood counts. The response to phenylbutazone was excellent. Within three days her back pain disappeared, and the pain in her knees was considerably decreased. The patient was very gratified with the comfort and increased mobility. After three weeks the phenylbutazone dose was decreased to 200 mg. twice daily. Blood counts were done weekly until Nov. 4, 1952, and found to be within normal limits. On Nov. 21 she complained of nausea and loss of appetite and vomited on two occasions. She voluntarily discontinued ingestion of phenylbutazone for two days and then again resumed taking it. She failed to get a blood count for three weeks. On Nov. 26 she complained of painful throat, fever, malaise, weakness, and nausea. She was examined in the office two days later, at which time her temperature was 100.4 F, pulse was 84, and blood pressure 134/80. There was marked injection of the pharynx. The anterior cervical lymph nodes were enlarged and tender. Examination of the heart and lungs revealed no abnormalities. There was no enlargement of the liver or spleen. The hands and knees showed deformities characteristic of osteoarthritis. At this time the white blood cell count was 3,100, with no polymorphonuclear cells present. She was given large doses of penicillin and streptomycin. Corticotropin (ACTH) was administered intramuscularly. The following day the white blood count was 3,400, with no mature granulocytes present. The hemoglobin level was 11.6 gm. per 100 cc. and the red blood cell count was 3.8 million. Two days after admission the white blood count was 2,200, with the following differential count: no mature granulocytes, 36% metamyelocytes, 8% myelocytes, 52% lymphocytes, and 4% monocytes. On the third hospital day the white blood count was 3,600, with 30% segmented polymorphonuclear neutrophils. Thereafter she did well clinically, and on the sixth hospital day her white blood cell count had returned to normal and the patient was discharged.

COMMENT

Early reports on phenylbutazone stressed the similarity of its chemical structure to that of aminopyrine. It was suspected, therefore, that agranulocytosis might be among its toxic reactions, and cautiousness with careful observation in the use of this drug was urged. It was recommended that blood counts be taken at weekly intervals during the early stages of therapy and that the patients be watched carefully for any indications of toxic reactions. With widespread use of this drug more cases of agranulocytosis will occur. To date we are not aware of any deaths from agranulocytosis due to phenylbutazone. To avoid fatalities we would strongly recommend that blood counts be done each week, and that the patient be given only enough medication for the intervals between blood counts.

SUMMARY

A case of agranulocytosis resulting from use of phenylbutazone (butazolidin*) is described. Weekly blood cell counts and caution are urged in use of this drug.

425 Republic Bldg. (Dr. Bershof).

3. Stephens, C. A. L., Jr.; Yeoman, E. E.; Holbrook, W. P.; Hill, D. F., and Goodin, W. L.: Phenylbutazone (Butazolidin®) in Rheumatoid Arthritis, J. A. M. A. **150**: 1084 (Nov. 15) 1952.

4. Steinbrocker, O.; Berkowitz, S.; Ehrlich, M.; Elkind, M., and Carp, S.: Phenylbutazone in Arthritis and Other Musculoskeletal Disorders, J. A. M. A. **150**: 1087 (Nov. 15) 1952.

COUNCIL ON PHARMACY AND CHEMISTRY

NEW AND NONOFFICIAL REMEDIES

The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application.

R. T. STORMONT, M.D., *Secretary.*

Naphazoline Hydrochloride-U.S.P. (See New and Nonofficial Remedies 1952, p. 189).

Ciba Pharmaceutical Products, Inc., Summit, N. J.

Solution Privine Hydrochloride 0.1% (Ophthalmic): 15 cc. dropper bottles. A buffered solution containing 1 mg. of naphazoline hydrochloride in each cubic centimeter. Preserved with 0.0065% methylparaben and 0.0035% propylparaben.

Streptomycin-U.S.P. (See New and Nonofficial Remedies 1952, p. 132).

The Wm. S. Merrell Company, Cincinnati.

Streptomycin Sulfate: 1 cc. and 5 cc. vials. Streptomycin sulfate equivalent in activity to 1 gm. and 5 gm. of streptomycin base, respectively.

Sodium *p*-Aminosalicylate (See New and Nonofficial Remedies 1952, p. 88).

Gold Leaf Pharmacal Company, Inc., New Rochelle, N. Y.

Powder Para-Pas Sodium: 113.4 gm., 226.7 gm., 454 gm., and 2.27 kg. bottles, and 11.3 kg. and 22.7 kg. drums; for compounding use.

Theophylline-Sodium Glycinate (See New and Nonofficial Remedies 1952, p. 303).

The Central Pharmacal Company, Seymour, Ind.

Solution Synophylate: 10 cc. and 20 cc. ampuls. A solution containing 40 mg. of theophylline-sodium glycinate in each cubic centimeter.

Sulfadiazine-U.S.P. (See New and Nonofficial Remedies 1952, p. 95).

Boyle & Company, Los Angeles.

Tablets Sulfadiazine: 0.5 gm.

COUNCIL ON PHYSICAL MEDICINE AND REHABILITATION

APPARATUS ACCEPTED

The following additional products have been accepted as conforming to the rules of the Council on Physical Medicine and Rehabilitation of the American Medical Association for inclusion in Apparatus Accepted. A copy of the rules on which the Council bases its action will be sent on application.

RALPH E. DE FOREST, M.D., *Secretary.*

Colostomy Control Button

Carl F. Surface, 3216 Iola Ave., Des Moines 12, Iowa.

The Colostomy Control Button is a device to be fitted into a colonic fistula in order to prevent the undesired escape of intestinal contents. It consists of three parts: (1) an aluminum disk about 66 mm. in diameter, (2) a hollow rubber stem or axis projecting from the center of the disk, and (3) a rubber disk or broad flange at the end of the stem. The large size button weighs 23.5 gm.; the rubber stem is 15 mm. long and 11 mm. in diameter; the rubber disk is 25 mm. in diameter. The small size button weighs 18 gm.; its rubber stem is 45 mm. in length and 15 mm. in diameter, and the rubber disk is 34 mm. in diameter. The stems are available in various lengths.

Colostomy Control Button

The aluminum disk has a central opening that communicates with the passage through the hollow rubber stem. The smaller, rubber disk is made of soft rubber in two separable layers in such a way that when a rod is thrust through the stem, the rubber is deformed into a narrow, pointed shape for insertion into the stoma. When the rod is withdrawn, the rubber resumes its disk-shape which gives the device its self-retaining feature.

It is assumed that the patient will wear a little absorbent material about the stoma, between the skin and the metal disk. He is to be warned also that the colonic mucosa is insensitive, that abrasions must be avoided during the insertion, and that the surgeon must decide whether the device is appropriate for a given colostomy.

The Council on Physical Medicine and Rehabilitation voted to accept the Colostomy Control Button provided the above limitations are made clear.

Whitehall Hydromassage Whirlpool Bath, Models JO-10, 10A, 20, 20A, 60, 60A, 80, and 90

The Whitehall Electro Medical Co., Inc.,
19 Wall St., Passaic, N. J.

The Whitehall Hydromassage Whirlpool Bath is essentially a tank provided with a motor-driven mechanism that agitates the water. The mobile models are mounted on casters so that they can be moved about on the floor. The motor requires a 60-cycle alternating current at 115 volts and consumes 675 watts of power. Accessories include an adjustable stainless steel suspension seat, a stainless steel armrest, a built-in electric heater, and a counter-poise which, running up and down inside a steel tube, facilitates the raising and lowering of the agitator mechanism. The apparatus is shipped in two boxes. The larger contains the stainless steel tank with the accessories; the smaller contains the electric motor and turbine ejector. Other accessories are available and are represented in the tabulation below by the following symbols: T, dial thermometer; H, two rubber filler hoses; D, drain and overflow assembly.

Whitehall Hydromassage Whirlpool Bath

Data on Whitehall Hydromassage Whirlpool Baths

Model	JO-10	JO-10A	JO-20	JO-20A	JO-60	JO-60A	JO-80	JO-90
Power consumed (watts)	675	675	675	675	675	675	500	500
Accessories	T, H	T, H	T, H, D	T, H, D	T, H	T, H	T, H	T, H
Net weight of turbine ejector (lb.)	60	60	65	60	57	52	47	46
Data for Crated Article								
Height (cm.)	132	132	132	132	97	97	97	73
Length (cm.)	61	61	61	61	46	46	46	41
Width (cm.)	117	117	117	117	91	91	91	69
Height (in.)	52	52	52	52	38	38	38	29
Length (in.)	24	24	24	24	18	18	18	16
Width (in.)	46	46	46	46	36	36	36	27
Weight (kg.)	167	141	148	145	95	92	77	59
Weight (lb.)	368	311	325	318	209	202	168	129
Inside Dimensions of Tank								
Length (cm.)	91	91	91	91	71	71	71	56
Width (cm.)	51	51	51	51	38	38	38	33
Depth (cm.)	71	71	71	71	53	53	46	31
Length (in.)	36	36	36	36	28	28	28	22
Width (in.)	20	20	20	20	15	15	15	13
Depth (in.)	28	28	28	28	21	21	18	12
Calculated Capacity of Tank (filled to brim)								
Liters	290	290	290	290	126.5	126.5	110	50
Gallons	77	77	77	77	33.5	33.5	29	13
Mobile or Stationary	M	M	S	S	M	M	M	M

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GLYCOGEN STORAGE DISEASE

While glycogen has been known for many years to be a polymer of glucose, the manner in which the glucose units are joined to each other has not been completely elucidated. Recently, Cori and associates [1] have studied the structure of glycogen obtained from different species by using a stepwise enzymatic degradation of the long glycogen chain. This was accomplished by the use of the enzymes phosphorylase and glucosidase successively. These investigators concluded that glycogen possessed a multibranched structure that is best shown by a tree-like model. The work was expanded to include investigations on the composition of glycogen isolated from the livers and muscle of normal subjects and of glycogen obtained from similar tissues of 10 patients with glycogen storage disease (von Gierke's disease). In this disease there is usually an excessive deposition of glycogen in the liver and other affected organs. In spite of increased amounts of carbohydrate in the liver, these persons do not appear to be able to mobilize glycogen readily, as indicated by hypoglycemia during fasting, increased insulin sensitivity, and little elevation in blood sugar after administration of epinephrine. Illingworth and Cori [2] found that the glycogen isolated from the livers of 8 of these 10 patients with von Gierke's disease showed no abnormality of structure. The other two livers yielded glycogen that showed, in general, structures with much less branching of the glucose units. While all these subjects could not readily convert the stored glycogen into glucose and since they showed no constant abnormality in the structure of the glycogen, it was believed that a defect in the enzyme system involved in glycogenolysis causes this condition.

By considering the enzymes in the liver necessary for the conversion of glycogen to glucose, Cori and Cori [3] concluded that the metabolic disturbance in glycogen storage disease was due to a deficiency of either amylo-1,6-glucosidase or glucose-6-phosphatase. This latter enzyme system was investigated further. In the two severest cases of von Gierke's disease (both fatal) the liver homogenates showed practically no glucose-6-phosphatase activity, and in the four milder cases marked decreases in the activity of this specific phosphatase were noted in the liver homogenates. This diminution in activity was due to a decrease in the enzyme itself and was not caused by an increase in enzyme inhibitor or loss of cofactor, since experiments designed to show the presence of an inhibitor or cofactor were negative. While it is possible to explain the increase in glycogen in the livers of these patients by the absence of the enzyme glucose-6-phosphatase, the same reasoning cannot be applied to the abnormal accumulation of glycogen in skeletal or heart muscle, since glucose-6-phosphatase is normally absent from these two tissues. A deficiency of some other enzyme may account for this phenomenon. Von Gierke's disease, first described by him in 1929 [4] as hepato-nephromegalia glykogenica, has been the subject of considerable investigation; now, as a result of the aforementioned studies, it appears that at least one important factor in its production is a definite enzymatic lesion, a lack of glucose-6-phosphatase.

1. Illingworth, B.; Larner, J., and Cori, G. T.: Structure of Glycogens and Amylopectins: I. Enzymatic Determination of Chain Length, J. Biol. Chem. **189** (pt. 2): 631-640, 1952. Larner, J.; Illingworth, B.; Cori, G. T., and Cori, C. F.: Structure of Glycogens and Amylopectins; II. Analysis by Stepwise Enzymatic Degradation, ibid. **189** (pt. 2): 641-651, 1952.
2. Illingworth, B., and Cori, G. T.: Structure of Glycogens and Amylopectins: III. Normal and Abnormal Human Glycogen, J. Biol. Chem. **189** (pt. 2): 653-660, 1952.
3. Cori, G. T., and Cori, C. F.: Glucose-6-phosphatase of the Liver in Glycogen Storage Disease, J. Biol. Chem. **189** (pt. 2): 661-667, 1952.
4. von Gierke, E.: Hepato-Nephromegalia Glykogenica. (Glycogenspeicherkrankheit der Leber und Nieren), Beitr. z. path. Anat. u. z. allg. Path. **82**: 497-513, 1929.

SPEECH WITHOUT VOCAL CORDS

In the treatment of cancer of the larynx, complete eradication of the growth by means of total removal of the structure, together with subsequent recovery by the patient, are of primary importance. Since the greatest handicap that remains after the operation is absence of speech, speech reeducation is required to rehabilitate the patient who has undergone laryngectomy so that he may once more become a reasonably contented, gainfully employed, and socially acceptable member of society.[1] The immediate training and production of a pseudo-voice is now recognized as an integral part of the management in these cases, and the patient should not be dismissed by the surgeon until every possible opportunity has been given him to acquire new speech.[2] Artificial mechanical devices may be reserved for the few patients who cannot master esophageal speech for some special reason.

There are several procedures by means of which artificial speech is produced. It is generally agreed, however, that the method known as esophageal speech, if it can be acquired, is preferable to mechanical speech. According to Bateman and his associates,[3] most patients are able to master esophageal speech within a month or two. Esophageal speech differs from normal speech chiefly in the anatomic structures involved. Martin declares that a comparison of the mechanism involved in normal speech with that acquired by the patient who has undergone laryngectomy shows that the essentials for producing sound in both instances are the same. Normally, air from the lungs, on exhalation, passes by way of the trachea through the narrow aperture of the glottis (vocal cords). In esophageal speech, the air pocketed in the upper esophagus is expelled or eructed upward through the closely approximated membranous surfaces of the cricopharyngeal sphincter (pseudo-glottis) into the hypo-

1. Martin, H.: Esophageal Speech, Ann. Otol. Rhin. & Laryng. **59**: 687 (Sept.) 1950.
2. Gatewood, E. T.: A New and Simple Procedure for Developing Esophageal Voice in the Laryngectomized Patient, Virginia M. Monthly **73**: 206 (May) 1946.
3. Bateman, G. H.; Dornhorst, A. C., and Leathart, G. L.: Oesophageal Speech, Brit. M. J. **2**: 1177 (Nov. 29) 1952.

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pharynx. Sound thus produced is converted into speech by the lips, teeth, tongue, and palate (the "molds of speech"). McCall [4] states that the ability of the patient to develop esophageal speech depends on the ease with which he can master the technique of belching. If a patient is capable of a sustained belch, he will be able to produce articulated esophageal speech. It is much easier to learn proper belching prior to laryngectomy than afterward; hence patients should be trained to belch a week or 10 days before the larynx is removed.

For patients in whom it is impossible, for one reason or another, to develop esophageal speech, there are two types of mechanical speech devices in current use. The first, according to Levin,[5] is the reed type of artificial larynx, which pipes air from the tracheal opening into the mouth, after a sound is produced by a vibrating reed. The resulting sound is then converted into a mechanical, artificial speech by the normal speech molds. The second device is an electrolarynx, which consists of a battery-driven vibrator over which a diaphragm is stretched. As the diaphragm vibrates, sound waves produced within the pharynx are delivered into the mouth and are articulated into a mechanical and muffled speech. Many patients find mechanical devices objectionable because they are conspicuous and the resulting voice is unnatural and possesses a monotonous tonal quality. For this group, reliance on the patient's own anatomic and physiological resources is superior to man's inventive genius.

REVISION OF THE ESSENTIALS OF AN APPROVED INTERNSHIP

In THE JOURNAL, Feb. 7, the complete report of the Advisory Committee on Internships was published. In this issue (page 579) appear the revised Essentials of an Approved Internship, for which the report served as amplification and emphasis. The Essentials have been reorganized and expanded since the last edition. The internship has been clearly defined, including the types of intern programs approved by the Council. Throughout the Essentials, the concept of the internship as an educational experience has been stressed. As stated in the preface, "the internship can be conducted only in those hospitals in which the educational benefits to the interns are considered of paramount importance with the service benefits to the hospital of secondary significance."

Specific changes in the requirements for approval include increase in bed capacity to 150 beds (excluding bassinets), increase in annual admissions to 5,000 (excluding births), and autopsy rate raised to 25%. The provisions relative to bed capacity and annual admissions apply as of Jan. 1, 1953, to hospitals seeking initial approval for intern education. The 25% requirement for autopsies became effective for all hospitals beginning with the calendar year Jan. 1, 1953. One requirement is essentially new in concept; i. e., a hospital must obtain at least two-thirds of its normal complement of interns in order to qualify for continued approval. Failure to meet this requirement for two successive years will result in reevaluation of the hospital's approved status. This provision will become effective in computing the ratio of internships offered and interns assigned for the year July 1, 1954—June 30, 1955. The determination as to the normal intern complement is made by the hospital itself and not by any "quota" system. Accordingly, a hospital may raise or lower the number of internships within the general range (15 to 25 beds per intern) on request to the Council. Should a hospital in a given year be unsuccessful in obtaining the required two-thirds of its complement of interns, it can reduce the number of internships offered the next year in order to increase its probabilities for meeting the two-thirds requirement. When this is done, the services or sections of the hospital to be covered by the intern staff should be reviewed critically from the standpoint of their contribution to the intern educational program. Those services that do not contribute effectively to the intern's education should be eliminated from intern coverage, thus permitting the hospital to maintain the necessary intern-bed ratio and still meet the requirement as to intern complement.

In commenting on the necessity for this change, the point is made that it is improbable that a successful internship program can be conducted when the intern staff falls below the two-thirds level. Under such circumstances, interns who are appointed must assume a greatly increased work load with a resultant deterioration in their educational experience. This policy relative to intern complement had the full support of the Advisory Committee on Internships and is considered necessary to assure that the intern will receive the education and training to which he is considered entitled when he accepts an appointment in a hospital approved by the Council. Further, it should result in a more realistic appraisal by the hospital of its internship needs.

The new Essentials constitute a clear and concise statement of the internship as a part of medical education. The section "Organization and Conduct of the Internship Teaching Program" is particularly commended to the attention of those responsible for intern education in hospitals throughout the country. The Council and the Advisory Committee on Internships, which collaborated in the development of the present revision, have developed a document that effectively defines the internship and its role in modern medical education.

ORDERING OF DRUGS BY PHYSICIANS

The Durham-Humphrey amendment to the Federal Food, Drug, and Cosmetic Act, which became effective April 26, 1952, is posing some problems that affect the relations between physicians, pharmacists, and patients. This amendment places responsibilities on the pharmacist that must be met by him if he is to avoid violating the law. An understanding of these responsibilities by the prescribing physician will help keep misunderstanding to a minimum without interference with the service that pharmacy and medicine are expected to provide. In this issue of THE JOURNAL (page 577) is a letter from a representative of the Food and Drug Administration that points up some of the problems that have arisen since the enactment of the Durham-Humphrey amendment. It will interest all physicians who prescribe drugs.

4. McCall, J. W.: Preliminary Voice Training for Laryngectomy, Arch. Otolaryng. 38: 10 (July) 1943.

5. Levin, N. M.: Speech Rehabilitation After Total Removal of Larynx, J. A. M. A. 149: 1281 (Aug. 2) 1952.

ORGANIZATION SECTION

FEDERAL MEDICAL LEGISLATION

Federal Board of Hospitalization

Congressman Teague (D., Texas) proposes in H. R. 633 to establish a federal board of hospitalization composed of the Attorney General, Secretary of Defense, Secretary of the Interior, Director of the Bureau of the Budget, Federal Security Agency Administrator, Administrator of General Services Administration, and Administrator of Veterans' Affairs. The last named would be chairman. The board would seek to coordinate services; prevent duplications of services and over-building of hospitals and health facilities; attempt to improve efficiency; and decide the need for existing and proposed facilities. The bill is similar but not identical with S. 3314 of the 82nd Congress, which proposed a board of 10 members, 4 from private life. H. R. 633 has only representatives of government on the board. This measure was referred to the Veterans' Affairs Committee.

Tax Deduction for Health Insurance Premiums

In H. R. 482 Representative Keating (R., N. Y.) proposes that a taxpayer may deduct 90% of the cost of health insurance premiums if his adjusted gross income is under $2,000; 85% if between $2,001 and $4,000; 80% if between $4,001 and $6,000; 75% if between $6,001 and $8,000; 70% if between $8,001 and $10,000; and 60% if $10,001 or over. This was referred to the Ways and Means Committee. Congressman Hand (R., N. J.) in H. R. 1029 would authorize deductions from the gross income of a percentage of subscription charges for certain health insurance plans that are nonprofit and otherwise meet requirements of separate legislation proposed by Senators Flanders and Ives in the 81st Congress. The deductible percentage is identical with that proposed by Congressman Keating in H. R. 482. This measure was referred to the Ways and Means Committee.

Medical Expense Deductions

As part of H. R. 474, Congressman Keating (R., N. Y.) proposes that all medical expenses including premiums for health and accident insurance could be deducted from an adjusted gross income if the income is under $2,000; all except 1% if the income is between $2,000 and $4,000; all except 2% if between $4,000 and $6,000; all except 3% if between $6,000 and $8,000; all except 4% if between $8,000 and $10,000; and all except 5% if over $10,000. This was referred to the Ways and Means Committee.

Health Insurance Premium Withholding for Federal Employees

A proposal of Congressman Miller (D., Calif.), H. R. 1590, authorizes, on the employee's request, withholding of subscription charges for hospitalization, accident, and life insurance from federal employees' compensation. Currently federal employees covered by these types of insurance plans must designate one or more of their number to make premium collections. The measure was referred to the Post Office and Civil Service Committee.

Construction of Sixteen Thousand Additional Veterans Administration Beds

Senator Murray (D., Mont.) in S. 370 would authorize the construction of an additional 16,000 beds that were dropped from the budget three years ago. This measure, identical with H. R. 28 by Congresswoman Edith Rogers (R., Mass.) and H. R. 261 by Congressman Elliott (D., Ala.), was referred to the Labor and Public Welfare Committee.

The summary of federal legislation was prepared by the Washington Office of the American Medical Association and the summary of state legislation by the Bureau of Legal Medicine and Legislation.

Hospital Care and Medical Treatment for Veterans Residing Abroad

Congressman Doyle (D., Calif.), in H. R. 1543, would permit the Veterans Administration to furnish hospital care and medical treatment for service-connected disabilities of U. S. citizen veterans residing abroad. The U. S. has only reciprocal agreements with foreign countries for the care of visiting veterans. This measure, identical with H. R. 35 by Congresswoman Edith Rogers (R., Mass.), was referred to the Veterans' Affairs Committee.

Lengthening of Presumption of Service Connection Period for Chronic and Tropical Diseases

Congressman Battle (D., Ala.) in H. R. 1573 introduces an identical measure to H. R. 25 by Congresswoman Edith Rogers (R., Mass.). These measures would establish a presumption of service connection for chronic and tropical diseases diagnosed within three years after separation from military service instead of one year, as under the present law. Both measures were referred to the Veterans' Affairs Committee.

Transfer of Hospitals Between Veterans Administration and Department of Defense

Congresswoman Edith Rogers (R., Mass.) in H. R. 1414 would make possible a reciprocal arrangement for the transfer of hospital and related facilities between the Department of Defense and the Veterans Administration without the transfer of funds. Under the present law, the Veterans Administration can acquire hospital and related facilities from the Department of Defense without transfer of funds, but the Defense Department may not acquire such facilities from the Veterans Administration in the same manner. In the last Congress the Senate passed an identical bill but no action was taken by the House. The measure was referred to the Veterans' Affairs Committee.

Permanent and Total Disability Insurance

As a part of H. R. 1376 by Congressman Bryson (D., S. C.), insured persons who, in the opinion of the FSA Administrator, became permanently, physically, or mentally incapable of engaging in regular employment would be eligible for retirement benefits. The Administrator would determine disability and prescribe regulations. The bill was referred to the Ways and Means Committee.

Transferring Administration of Indian Hospitals to Public Health Service

Congressman Patten (D., Ariz.) proposes in H. R. 1057 to transfer the responsibility for the health of Indians from the Bureau of Indian Affairs to the U. S. Public Health Service. This measure is identical to H. R. 303 by Congressman Judd of Minnesota. Both bills were referred to the Committee on Interior and Insular Affairs.

Federal Aid for Public Health Education

Senator Humphrey (D., Minn.) in S. 461 would authorize one million dollars annually for the next five years for schools of public health to provide training leading to a graduate degree. The total federal payments could not exceed 50% of the basic operating cost of graduate instruction. The federal payments would consist of: (1) 15% of the basic operating cost of graduate instruction; (2) an additional $500 for each full-time student in excess of 30 such students; and (3) an additional sum of $500 for each full-time student enrolled in public health in excess of its average past enrollment of such students.

The Surgeon General would also be authorized to expend an additional one million dollars annually for the next five years in construction and equipment, up to 50% of such cost for establishing new schools of public health. To assist students $250,000 would be made available annually for the next five years. The funds would be distributed with the advice and recommendation of a National Advisory Council. The bill was referred to the Committee on Labor and Public Welfare.

Military Officer Candidate Training Program for Nurses

Congressman Cole (R., N. Y.) in H. R. 1240 would authorize the secretaries of all the armed services to establish cadet nurses' programs. The trainees would receive pay not in excess of $600 a year. On graduation they would be appointed as ensigns in the Navy or 2nd lieutenants in the Army or Air Force. Enrollment in the reserve corps, which would train them, and military service for each year of training would be required. The bill was referred to the Armed Services Committee.

STATE MEDICAL LEGISLATION

California

Bills Introduced.—A. C. R. 32, proposes to request the board of medical examiners to approve the **Western Medical College** as a school in which drugless practitioners may obtain the necessary additional training to enable them to apply for a physician's and surgeon's certificate. S. 431, proposes to add to the Business and Professions Code sections of the law authorizing the board of medical examiners to issue licenses to **physical therapy practitioners** and defines "physical therapy" as the treatment of any bodily or mental condition of any person by the use of the physical, chemical, and other properties of heat, light, water, electricity, massage, and active, passive, and resistive exercise, and the application of cataphoresis only when such application has been prescribed by a physician and surgeon. The use of roentgen rays and radium, for diagnostic and therapeutic purposes, and the use of electricity for surgical purposes, including cauterization, are not authorized and a license under this proposal would not authorize the diagnosis of disease. S. 450, to amend the workmen's compensation act, proposes that all medical records, x-rays, and other pertinent data in the hands of, or under the control of, the employer, his insurance carrier, or his representative, shall be made available directly to any consulting or attending **physician selected by the employee at his own expense.**

Massachusetts

Bills Introduced.—H. 338, proposes the enactment of a **cash sickness compensation law.** H. 1175, proposes to authorize the prescribing of rules and regulations governing the manufacture and sale of **hearing-aid devices,** which rules and regulations may provide for the prohibition of the sale or distribution of said devices without the same having been approved. H. 1181, proposes the creation of a **board of registration of chiropractors** and defines chiropractic as the science of locating and adjusting by hand, or by other means that may be recommended by chiropractic authorities to increase efficiency, interference with transmission or expression of mental impulses (nerve forces) in the human body, by correction of subluxations or misalignments of the vertebral column. X-ray and analytical instruments may be used for purposes of examination. Surgery is excluded. H. 1182, proposes the creation of a special commission to investigate and study relative to the training of **medical laboratory technologists.** H. 1386, proposes the establishment in metropolitan Boston of a graduate school for instruction in the **basic medical sciences.** H. 1388, proposes to authorize the trustees of the University of Massachusetts to construct and maintain a **medical and dental school** to be affiliated with the University of Massachusetts and to be located in or near the city of Boston. H. 1616, proposes the creation of a special commission to study the advisability of establishing a board to regulate and control the manufacture and sale of **hearing-aid devices.** H. 1619, proposes the creation of an unpaid special commission to make an investigation and study relative to the prevalence of the disease of **cancer** throughout the commonwealth. H. 1623, proposes that no **lobotomy, topectomy, or transorbital operation,** nor any brain operation designed to correct or alleviate a functional disorder of the mind, shall be performed, except under certain conditions relating to consent of the patient and approval by the staff of the hospital in which the operation is to be performed.

New York

Bills Introduced.—A. 113, to amend the education law, proposes the establishment of 50 state **scholarships to professional nurses** for the purpose of advanced education in teaching or administration of nursing. A. 127, to amend the vehicle and traffic law, proposes that applicants for an operators' or chauffeurs' license shall prove to the satisfaction of the commission that they are in good mental and physical health and free from any **heart or cardiovascular disease and of any mental defect or disorder.** Such proof would consist of a certificate of a duly licensed physician based upon a diagnosis personally made by such physicians or by a duly licensed psychiatrist with the aid of recently taken electrocardiograms and electroencephalograms and such other tests as the commissioner may require. A. 165, to amend the education law, proposes the establishment of 500 state **scholarships** to be awarded annually to residents to the state for attendance at a school of nursing approved by the regents for the training of **registered professional nurses.** A. 517, to amend the workmen's compensation law, proposes that a copy of every **report of examination,** finding, and opinion of a physician or medical consultant with respect to a claimant, shall be transmitted to such claimant or his authorized representative. S. 51, proposes the establishment of 5000 state **scholarships** to be awarded to legal residents of the state for attendance **at schools of nursing** for the training of registered professional nurses. S. 122, to amend the law relating to conduct of hospitals, proposes that every hospital supported in whole or in part by the public funds may employ **physicians and surgeons under a contract or salary arrangement** for the medical diagnosis and/or treatment of patients only when such diagnosis and treatment is a public charge. In all other cases such medical diagnosis and/or treatment shall be rendered to patients in such hospital independently of other hospital charges and under contractual relationship between the patient and the physician or physicians. S. 347, proposes, among other things, that no pharmacy shall be operated by, or in connection with any privately-owned voluntary nonprofit, or public hospital, public institution, clinic, or dispensary, unless it has been registered by the superintendent or other person in charge of such hospital, and proposes further that no **drugs, prescriptions, or poisons** shall be compounded or dispensed in any such pharmacy except by or under the personal supervision of a duly licensed and registered pharmacist. S. 519, to amend the law relating to barbiturates, proposes that the **refilling of any prescription for a barbiturate** or other hypnotic or somnifacient drug is prohibited unless the prescription includes a statement that it may be refilled and specifying the minimum interval between fillings and the total number of refillings prescribed.

Oklahoma

Bills Introduced.—H. 575, to amend the law relating to **barbiturates,** proposes that such regulations shall apply also to **amphetamine.** H. 585, proposes the enactment of a University Hospital Psychiatry and Neurology Service Act and state it to be the policy of the state and the intent of the act to provide the citizens of Oklahoma with a **diagnostic and remedial psychiatry and neurology service,** to provide the school of medicine of the University of Oklahoma with a means of furnishing professional education and research in psychiatry and neurology, to provide for the administration and use of the facilities, located in the university hospital. S. 46, proposes to authorize the superintendent or managing officer of every state institution to determine whether an inmate or patient of such institution is in need of **surgical or medical treatment,** and to cause the same to be administered by a person who is legally licensed to administer such treatment and who prescribes or recommends such treatment, and proposes further that the consent of the inmate or a relative thereof shall not be required or necessary. S. 60, proposes the enactment of an Oklahoma Occupational Health Act, authorizing the State Board of Health to designate by list those **diseases or illnesses which should be reported** and to request all physicians in the state to cooperate in the reporting of such **diseases.** S. 61, proposes to authorize, under certain circumstances, the examination and hospitalization of persons suspected of having **tuberculosis.**

Rhode Island

Bills Introduced.—S. 9, to amend the workmen's compensation act, proposes, among other things, that an employer shall, subject to the **selection of the employee of a particular physician, dentist,** or hospital, furnish reasonable medical, dental, and hospital services and medicines when they are needed and proposes that the employee may select the physician or dentist by whom and the hospital in which he desires to be treated if he makes such selection within a reasonable time after the beginning of his incapacity. S. 11, to amend the law relating to **narcotic drugs,** proposes that when a violation of the act involves a person under the age of 21 years the violator shall be punished by imprisonment for not more than 20 years and upon a second or subsequent conviction the punishment shall be imprisonment for not less than 5 years or any term of years and including life imprisonment.

South Dakota

Bills Introduced.—H. 595, proposes an appropriation for the **treatment of crippled children** by the state department of health. H. 597, proposes an appropriation for the purchase of necessary supplies and payment of necessary services and expenses incidental to the operation of a **state mental health program** by the state department of health. H. 598, proposes an appropriation for expenses incidental to the operation by the state department of health of a program of **hospital construction and of inspection and licensing** of hospitals and related institutions. S. 57, to amend the narcotic drug act, proposes to include as a **narcotic drug** any drug which the state health department may find by rule and regulation to have addiction-forming or addiction-sustaining liability similar to morphine or cocaine.

Texas

Bills Introduced.—H. C. R. 10, proposes that the legislature endorse and approve in principle the state board of hospitals and special schools' 14-point reform program for the **care and treatment of patients in the state's hospitals** and special schools. S. C. R. 4, proposes that the legislature go on record as opposing socialized medicine or **compulsory health insurance** in all their phases and that Texas members of the House of Representatives and U. S. Senate resist legislation setting up socialized medicine or compulsory health insurance. S. J. R. 2, proposes a constitutional amendment authorizing counties to constitute a **hospital district** for the purpose of erecting and maintaining a hospital system. S. 11, proposes to authorize the construction and maintenance of two new hospitals for the care, treatment, and support of **tuberculosis** patients of the state.

Utah

Bills Introduced.—H. 34, to amend the pharmacy practice act relating to the **refilling of prescriptions,** proposes that all physicians or other persons legally authorized to prescribe under laws of the state shall indicate on each prescription which of the following stipulations are to be followed by the pharmacist in the filling of the prescription: 1. The prescription shall not be refilled. 2. It may be refilled a specified number of times within a given period. 3. It may be refilled at will during the time specified. 4. Any other limitation on the refilling which the physician, or other person authorized by law, may find necessary. H. 36, to amend the law relating to narcotic drugs proposes among other things, that the term "physician" shall mean a person authorized by law to practice medicine and any other person authorized by law to treat sick and injured human beings and to use narcotic drugs in connection therewith.

MEDICAL NEWS

CALIFORNIA

Annual Meeting on Obstetrics and Gynecology.—The annual midwinter sessions of the Obstetrical and Gynecological Assembly will be held in Los Angeles, Feb. 16-20, with a faculty including Dr. N. S. Assali, Cincinnati; Dr. Francis B. Carter, Durham, N. C.; Dr. M. Edward Davis, Chicago; Dr. Ludwig A. Emge, Los Angeles; and Dr. Robert H. Williams, Seattle.

Radiological Conference.—The annual midwinter radiological conference, sponsored by the Los Angeles Radiological Society, will be held at the Ambassador Hotel, Feb. 21-22. Out-of-state speakers will include Drs. Fred J. Hodges, Ann Arbor, Mich., H. Dabney Kerr, Iowa City, and Ira H. Lockwood, Kansas City, Mo. Conference reservations may be made through Dr. Maurice M. Haskell, 615 Times Bldg., Long Beach 2; fee, $20. Courtesy cards are available by preregistration to radiological residents and radiologists in military service.

Society News.—The officers of the Los Angeles County Medical Association for 1953 are: president, Dr. Paul D. Foster, Los Angeles; vice-president, Dr. Verne C. Crowl, Huntington Park; and secretary-treasurer, Dr. Ewing L. Turner, Los Angeles.——Medical veterans of San Diego County recently organized themselves into the San Diego County Medical Veterans Society and selected the following officers pro tempore: Dr. Roy S. Averill, Chula Vista, president; Dr. Ira H. Wilson, San Diego, vice-president; Dr. Gordon D. Skeoch, San Diego, treasurer; Dr. Wilton M. Lewis, San Diego, recording secretary; and Dr. Clifford L. Graves, La Jolla, corresponding secretary.——The Long Beach Pediatric Society recently elected Dr. Kenneth A. Berkaw, president, Dr. Walter R. Buerger, vice-president, and Dr. Milton A. Katz, secretary-treasurer.——At the annual meeting of the Los Angeles Chapter of the California Academy of General Practice, Jan. 28, Dr. Charles F. Nelson, Beverly Hills, director of the Nelson Clinic, was elected president, Dr. Gordon B. Beckner, Los Angeles, president-elect, Dr. Madelene Beckenbach, Santa Monica, vice-president, and Dr. Donald G. Thompson, El Monte, secretary-treasurer.

COLORADO

Annual Postgraduate Clinics.—The annual midwinter postgraduate clinics of the Colorado State Medical Society will be held Feb. 17-20 at the Shirley-Savoy Hotel, Denver, (registration fee, $5). Morning sessions will be devoted to clinics in various hospitals, followed by luncheon and round-table discussions at the hotel, and the afternoon sessions to the presentation of papers at the hotel. Participating will be the following guest speakers: Dr. Donovan C. Browne, New Orleans; Dr. George A. Schumacher, Burlington, Vt.; Dr. Harris B. Shumacker, Indianapolis; Dr. Russell R. de Alvarez, Seattle; Dr. Fremont A. Chandler, Chicago; and Dr. Ralph Colp, New York.

DISTRICT OF COLUMBIA

Group Coverage Canceled.—The Medical Society of the District of Columbia has been notified that the United States Fidelity and Guaranty Company "has decided to withdraw from underwriting of group professional liability policies" and that, effective May 1, the anniversary date, the society's policy will be canceled. After that date the company will write selected risks on an individual basis only. The society's committee on medical ethics and deportment is endeavoring to get the company to reverse its decision.

Society News.—The Washington Psychiatric Society will meet in the auditorium of the Medical Society of the District of Columbia, Washington, D. C., Feb. 18, when "The Community, the Mental Hospital, and the Sex Offender" will be discussed by Dr. Bernard A. Cruvant, assistant clinical professor of psychiatry, and Dr. Francis J. Tartaglino, clinical professor of psychiatry, Georgetown University School of Medicine. Dr. Leon Salzman, associate clinical professor of psychiatry, also of Georgetown, will present a paper on "The Functional View of Sex."

Physicians are invited to send to this department items of news of general interest, for example, those relating to society activities, new hospitals, education and public health. Programs should be received at least three weeks before the date of meeting.

ILLINOIS

Chest Physicians Meet in Chicago.—The Illinois Chapter of the American College of Chest Physicians will meet at the St. Clair Hotel, 162 E. Ohio St., Chicago, Feb. 20. Dinner ($4.50 per person) at 7 p. m. will be followed by a scientific program during which the University of Chicago will make the following presentations:

Transpulmonary Oxygen Dissociation Curve as a Test of Pulmonary Function, John F. Perkins.
Pulmonary Studies in Scoliosis, Donald E. Cassels.
Report on Studies with Carbon 14 Labelled Isoniazid, William R. Barclay and Mr. William Manthei.
Mediastinal Lesions, Robert H. Ebert.

Physicians are cordially invited to attend the cocktail party, dinner, and meeting.

Prize in Industrial Medicine.—The Chicago Society of Industrial Medicine and Surgery offers an annual competitive prize award of $150 for a scientific paper in the field of industrial medicine and surgery, written by a physician in the Chicago area who has received his degree of doctor of medicine within the preceding six years. The paper, which must present original laboratory or clinical ideas or research data pertaining to industrial medical or surgical subjects, shall not have been previously published or presented at a meeting. The manuscript, which should be submitted by March 1, typewritten, triple spaced, should not be signed, but identified by a detached letter and mailed to the secretary of the society, Dr. Charles M. Drueck, Rm. 1300, 28 E. Jackson Blvd., Chicago 4.

Chicago

Meeting on School Health.—A joint meeting of the Chicago Medical Society and the Chicago Pediatric Society will be held at 8 p. m. Feb. 17 at the Children's Memorial Hospital, 707 W. Fullerton Ave. (DIversey 8-4040). A program on "Clinical Evaluation of the School Health Program in the Chicago Public Schools" will be presented:

Health Program—Introduction, John L. Reichert.
Cardiac Aspects of School Health, Carl J. Marienfeld.
Dental Aspects of School Health, John C. Bergmann, D.D.S.
Hearing Aspects of School Health, Richard E. Marcus.
School Health Councils, Dephane A. Jensen, R.N.
School Health Program—Evaluation, Kenneth S. Nolan.

Camp for Diabetic Children.—A summer camp for diabetic children will be opened for the fifth season under the auspices of the Chicago Diabetes Association, from July 21 to Aug. 10 at Holiday Home, Lake Geneva, Wis. The association will furnish dietitians and resident physicians, trained in the care of diabetic children. Boys and girls, aged 8 to 14, will be accepted at a fee of $150, which covers the three week camping period and transportation from Chicago. Fee reductions may be arranged when considered necessary. Physicians are requested to notify parents of diabetic children and to supply the names of children who would like to attend camp. Because of limited capacity, application should be sent promptly to: Service Unit, Chicago Diabetes Association, 110 S. Dearborn St., Chicago 3.

Borden Award to Dr. Hess.—Through the American Academy of Pediatrics, Dr. Julius H. Hess, professor emeritus in pediatrics, University of Illinois College of Medicine, Chicago, received the 1952 Borden award "for his many productive contributions to the care and management of the prematurely born infant." Dr. Hess was instrumental in the establishment of the first premature station at Michael Reese Hospital, Chicago. His books include "Principles and Practice of Infant Feeding," "Feeding and the Nutritional Disorders of Infancy and Childhood," and "The Premature Infant: Medical and Nursing Care" (with Lundeen).

KANSAS

Fluoridation of Water Supply.—The city of Iola is now fluoridating its water supply. The fluoridation machinery, which was ordered last spring, was put into operation at the city water plant Dec. 8.

Mental Health Training Program.—The state board of social welfare has unanimously approved a mental health cooperative and training program recommended by Dr. William Clarke Wescoe, dean of the University of Kansas School of Medicine, Kansas City, which provides for use, in the five state mental hospitals, of the services of senior medical students and physicians completing their three years' residency training. About 15 senior medical students will receive 5½ weeks' duty in state hospitals. Students will work in the hospital on a rotation basis under the supervision of the hospital supervisor or the clinical director. The second part of the plan will allow senior residency physicians to spend their final three or four months' training at the mental hospitals.

KENTUCKY

Seminar Broadcasts.—"The Significance of Cough" is the topic to be considered on the telephone seminar Feb. 24, 7:30 p. m., C.S.T., over a statewide network. Dr. Harper E. Richey, Louisville, will moderate the program. Others on the panel are Drs. Oscar O. Miller, John S. Harter, and Woodford B. Troutman, all of Louisville. Subsequent seminars will be "Office Proctology," broadcast on March 31, and "Ophthalmology in General Practice," on April 28.

Gift to Hospital.—Dr. Harvey R. Henry, who practiced medicine in Winchester until his retirement Jan. 1, 1945, has presented $25,000 to the Clark County Hospital's building fund, thus climaxing a series of contributions to the hospital beginning in 1916, when he turned over to the institution all the equipment from the Henry Infirmary. Dr. Henry, a former president of the Clark County Medical Society, has been a director of the hospital since its beginning almost 40 years ago.

LOUISIANA

State Medical Election.—The Louisiana State Medical Society at its annual meeting at Shreveport installed Dr. William E. Barker Jr., Plaquemine, as president and chose Dr. Philip H. Jones, New Orleans, president-elect; Dr. Ralph H. Riggs, Shreveport, first vice-president; Dr. T. F. Kirn, New Orleans, second vice-president; Dr. D. J. Fourrier, Baton Rouge, third vice-president; and Dr. Christian G. Cole, New Orleans, secretary-treasurer for another period of five years.

MAINE

Utah Honors Dr. Clarence Little.—In recognition of the services to cancer research of Clarence C. Little, Sc.D., Bar Harbor, the Sons of Utah Pioneers have commissioned a sculpture portrait to be hung in their hall of fame. Dr. Little, head of the Roscoe B. Jackson Memorial Laboratory, recently delivered an address at the University of Utah Union Building, Salt Lake City, on "Cancer and Genetics."

MARYLAND

Dr. Kornberg Goes to Missouri.—Dr. Arthur Kornberg, chief of the enzyme and metabolism section of the National Institutes of Health, Bethesda, since 1948, has been appointed professor of microbiology at Washington University, St. Louis, where he previously served as research assistant in biological chemistry. He was formerly senior assistant surgeon at the National Institutes of Health at Bethesda and staff member of New York University College of Medicine.

MASSACHUSETTS

Ophthalmic Fellowship.—The ophthalmic staff of the Massachusetts Eye and Ear Infirmary, Boston, has established a fellowship in honor of Dr. Frederick H. Verhoeff, Boston. Support of the fellowship will come chiefly from a fund amounting at present to about $60,000, which has been collected by the staff. The income will be used to make grants for research and study at the infirmary.

Personal.—Dr. Henry R. Viets, Boston, chief, Medical Advisory Board, National Muscular Dystrophy Research Foundation, Inc., Liberty, Texas, recently addressed the foundation at a dinner in his honor at the Liberty City Hall Auditorium, where he discussed the objectives and progress of the foundation.——Dr. Stanley Cobb, professor of neuropathology at Harvard Medical School and psychiatrist-in-chief at the Massachusetts General Hospital, Boston, received an honorary degree of doctor of science from the University of Maryland at the recent opening of the new Psychiatric Institute in Baltimore.——At the celebration of the centenary of Laval University Faculty of Medicine, Quebec, Canada, Dr. Louis E. Phaneuf, professor of gynecology at Tufts College Medical School, Boston, was granted the degree of doctor of medicine, *honoris causa*.

MICHIGAN

Dr. Otto Beck Honored.—Dr. Otto O. Beck, Birmingham, immediate past president of the Michigan State Medical Society, was recently named "outstanding member of the year" by the Oakland County Medical Society, of which he is also a past president. He was honored at a banquet attended by 176 physicians, including 16 officers and councilors of the Michigan State Medical Society.

County Secretaries Conference.—The annual County Secretaries Conference will be held Feb. 25 at the Porter Hotel, Lansing. The morning meeting will be devoted to the following program:

The Ballot Battle to Save Bay City General Hospital, Neal R. Moore, Bay City
How to Report Cases to Michigan Medical Service, Robert L. Novy, Detroit, and Mr. John W. Castellucci, Detroit.
Exchange of Scientific Programs Between County Medical Societies, Henry E. Cope, Lansing.
Model Constitution and By-Laws for County Medical Societies, Mr. J. Joseph Herbert, Manistique.
Basic Science Act, Eugene A. Osius, Detroit.
Medical Practice Act, Ewald C. Swanson, Vassar.
Techniques—New and Old, L. Fernald Foster, Bay City.

In the afternoon there will be an inspection of the new Michigan State Medical Society building at 606 Townsend St., Lansing.

MINNESOTA

Narcotic Violation.—Dr. Russell R. Heim, 5048 Oliver Ave., S., Minneapolis, was convicted in the U. S. District Court at Minneapolis for violation of the federal narcotic law. On Nov. 10, 1952, Dr. Heim was sentenced to a term of four years and incarcerated at the federal correctional institution, Milan, Mich.

Phi Delta Epsilon Lecture.—The sixth annual Phi Delta Epsilon lecture, "Iron Metabolism and Iron Deficiency Anemia," will be given by Dr. Carl V. Moore, professor of medicine, Washington University School of Medicine, St. Louis, Feb. 17 at 8 p. m. at the University of Minnesota Medical School, Minneapolis. Dr. Moore will also discuss "Newer Concepts of Idiopathic Thrombocytopenic Purpura" at the meeting of the Minneapolis Society of Internal Medicine, Feb. 18.

MISSISSIPPI

Society News.—Dr. G. Lamar Arrington, Meridian, president of the Mississippi State Medical Association, has announced the dissolution by the council of the Amite County Medical Society and the Wilkinson County Medical Society, effective Dec. 31, 1952, and the simultaneous chartering of the Amite-Wilkinson County Medical Society.

State Breaks Ground for Medical School.—Ground was recently broken for the new $8,500,000 University Medical School and Teaching Hospital in Jackson, which will give the state its first four year medical course under the supervision of the University of Mississippi School of Medicine. Plans call for 224,000 sq. ft. of floor space to be allocated to the school and 212,000 sq. ft. for the hospital. The teaching hospital will be Mississippi's largest, with 350 beds and facilities for the care of 50,000 outpatients annually; eventually, expansion to 525 beds is planned. The school will care for 320 students, with a possible eventual enrolment of 400. Completion of the project is scheduled for 1954, with first classes and admission of patients probably not before 1955.

NEW JERSEY

Chest Physicians Meeting.—The New Jersey Chapter of the American College of Chest Physicians will meet at 8:30 p. m., Feb. 24, at the Roosevelt Hospital, Metuchen. Dr. Charles P. Bailey, Philadelphia, will discuss recent advances in cardiac surgery.

Society News.—At a recent meeting of the New Jersey Allergy Society the following officers were elected: president, Dr. William C. Greifinger, Newark; vice-president, Dr. Edward E. P. Seidmon, Plainfield; secretary, Dr. William B. Nevius, East Orange; and treasurer, Dr. Joseph Skwirsky, Newark.——The New Jersey Neuropsychiatric Association chose the following officers for 1953: Dr. C. Archie Crandell, Greystone Park, president; Dr. Frank P. Pignataro, Red Bank, president-elect; Dr. J. Lawrence Evans Jr., Englewood, secretary; and Dr. Evelyn Parker Ivey, Morristown, treasurer.——The New Jersey Society of Medical Technologists and the New Jersey Society of Clinical Pathologists will sponsor a scientific program at the Presbyterian Hospital, Newark, 10 a. m., Feb. 15. Laboratory demonstrations will be presented in the morning, and after luncheon a lecture on "Technique Used in Virus Research" will be given by Victor J. Cabasso, Sc.D., Lederle Laboratories, Pearl River, N. Y. Physicians participating in the program include Drs. Samuel A. Goldberg, Newark, Thomas K. Rathmell, Trenton, and Edwin H. Albano, East Orange, president of the New Jersey Society of Clinical Pathologists.

NEW YORK

Lewis County Heart Clinic.—The Lewis County Medical Society, in cooperation with the state department of health, the Medical Society of the State of New York, the American Heart Association, and the local heart organization, has established a heart clinic for children up to 18 years of age within the county. The patient of any physician may be examined, and the case reviewed and discussed by a group of physicians.

Scout Camp Physician Needed.—The Greater New York Councils, Boy Scouts of America (120 W. 42nd St., New York 36, WIsconsin 7-4251), are seeking a head of health services for the Ten Mile River Scout Camps, comprising 12 camp divisions located on the 12,000 acre reservation near Narrowsburg. The six infirmaries and the medical and nursing staff come under the direction of the health officer. He should be licensed in New York State. The position pays $750 (June 25 to Aug. 31 with a precamp period for selection and training of medical staff), plus board and transportation. Arrangements are available for family accommodations at a nominal cost.

New York City

Harvey Lecture.—Dr. Julius H. Comroe Jr., professor of physiology and pharmacology, the Graduate School of Medicine, University of Pennsylvania, Philadelphia, will deliver the fifth Harvey lecture of the current series at the New York Academy of Medicine Feb. 19 on "The Functions of the Lung."

Lecture on Oral Lesions.—Paul E. Boyle, professor of oral histology and pathology, School of Dentistry, the Thomas W. Evans Museum and Dental Institute, University of Pennsylvania, will read a paper on "Differential Diagnosis of Soft Tissue Lesions of the Mouth" at the monthly conference of the New York Institute of Clinical Oral Pathology, Feb. 16, at the New York Academy of Medicine, room 440, at 9 p. m.

Seminars in Hematology.—On Feb. 18, 8:30 p. m., at Mount Sinai Hospital, Dr. Louis K. Diamond, Harvard Medical School, Boston, will speak on "Treatment of Erythroblastosis with the Prevention of Kernicterus." The following day at 9:30 a. m. he will discuss "Intractable Hemorrhage Due to Fibrinogen Deficiency During Pregnancy and During Prolonged Surgical Procedures." These presentations, which are a part of the hospital's seminars in hematology, will be presented as joint seminars with the pediatric and obstetric departments.

Personal.—Dr. Charles G. Child III, associate professor of clinical surgery at Cornell University Medical College, has been appointed surgeon-in-chief of the New England Center Hospital-Pratt Diagnostic Clinic, a unit of the New England Medical Center in Boston. He will also serve as professor of surgery at Tufts College Medical School, Boston, the teaching base for the center.——Dr. Jerome S. Tobis, director of the department of physical medicine and rehabilitation of the New York Medical College, Flower and Fifth Avenue Hospitals, New York, and Dr. Earl C. Gluckman, chief of professional services at the Veterans Administration Hospital, have accepted appointment on the medical staff of the Kessler Institute for Rehabilitation, West Orange, N. J.——The German consul general has bestowed on Dr. Ludwig Teleky, on behalf of the Federal Republic of Germany, the Grand Cross of the Order of Merit for his contribution to medical science. The Order of Merit, instituted by the German government in September, 1951, for "political, social, economic, and spiritual contributions to the reconstruction of West Germany . . . is intended as a token of distinction for those whose efforts have helped the peaceful recovery of the Federal Republic."——Louis I. Dublin, Ph.D., formerly second vice-president and statistician of the Metropolitan Life Insurance Company (*J. A. M. A.* 150:1606 [Dec. 20] 1952), has been appointed consultant to Health Information Foundation, 420 Lexington Ave., New York 17.

NORTH CAROLINA

Lecture on Medical History.—Dr. Hyman I. Goldstein, Camden, N. J., will address the newly organized Josiah C. Trent Society of the History of Medicine at Duke University School of Medicine, Durham, Feb. 17 on "Errors of Priority Credit in Medicine and Surgery—Forgotten Names."

Grant for Poliomyelitis Research.—Duke University has received a $9,928 March of Dimes grant for muscle research to be conducted by Joseph E. Markee, Ph.D., chairman of the department of anatomy. His project is designed to determine whether flexor muscles can be made to do the work of extensor muscles and vice versa.

PENNSYLVANIA

Hospital News.—A testimonial dinner was recently held at the Penn-Alto Hotel in honor of Dr. George E. Boesinger, retiring chief of the pathology department of Altoona Hospital, and Dr. Logan E. Hull of the obstetric service, in recognition of "their long and faithful service to the hospital." Both physicians received inscribed gold watches and testimonial scrolls from other members of the staff.

Philadelphia

Course in Occupational Health.—The University of Pennsylvania and the Chamber of Commerce of Greater Philadelphia will sponsor a course in occupational health on Wednesdays (2 to 5 p. m.), Feb. 18 through May 6 in the Surgical Amphitheater, Hospital of the University of Pennsylvania. Among the topics to be covered are industrial medical services (management's viewpoint), occupational diseases, employment of cardiac patients, rehabilitation of the injured worker, employment of the handicapped, and problems of retirement. Fee for the course is $100, payable to Trustees, University of Pennsylvania.

TEXAS

Obstetricians and Gynecologists Meet.—Dr. Christopher J. Duncan, associate professor of gynecology, Harvard Medical School, Boston, is guest speaker at the Texas Association of Obstetricians and Gynecologists' meeting Feb. 13-14 at the Hilton Hotel, Fort Worth. Dr. Duncan, who is also associate chief surgeon at the Free Hospital for Women in Brookline, Mass., will speak on "The Ovarian Salvage at the Time of Routine Total Hysterectomy" and "Complications in Six Years of Routine Total Hysterectomy at the Free Hospital for Women."

ALASKA

Dr. Gentry Takes First Health Officer Post.—Dr. John T. Gentry, Anchorage, is Alaska's first district health officer as medical director of the territory's first local health district, the new Greater Anchorage Health District. An officer of the Public Health Service, he worked as public health physician in New York State and later at the Communicable Disease Center in Atlanta, Ga.

GENERAL

Society News.—At its annual meeting in Seattle, Jan. 16-17, the Northwest Society for Clinical Research elected the following officers: president, Dr. Elmer F. Christopherson, Vancouver, British Columbia, Canada; vice-president, Dr. Frank L. Skinner, Vancouver; and secretary-treasurer, Dr. Arthur L. Rogers, Portland, Ore. The next meeting will take place Jan. 15-16, 1954, in Vancouver.

Otolaryngological Journals for Korea.—Severance Union Medical College in Seoul, Korea, which lost its entire library during the first months of the war, urgently requests back files of otolaryngological journals, especially the *Archives of Otolaryngology*. All back numbers, from 1941 to the present, whether the files are complete or not, will be greatly appreciated. Those interested in contributing copies of this journal are requested to communicate with Dr. Douglas N. Forman, Christian Medical Council for Overseas Work, Rm. 1111, 156 Fifth Ave., New York 10.

Course in Industrial Safety.—The National Safety Council offers courses on the "Fundamentals of Industrial Safety," Feb. 16-20, March 9-13, May 11-15, June 8-12, Nov. 9-13, and Dec. 7-11. Among the subjects included are accident records, safety inspections, workmen's compensation, industrial health problems, machine guarding, electrical hazards, fire prevention, personal protective equipment, personal factors, and supervision. For safety personnel interested in more advanced work, a one week course on "Safety Management Techniques" is offered. The next advanced course will be given April 13-17. Information may be obtained from the National Safety Council, 425 N. Michigan Ave., Chicago 11.

Regional Meeting in Denver.—The American College of Physicians will hold its annual regional meeting Feb. 17 at the University of Colorado School of Medicine, with Dr. Constantine F. Kemper, Denver, governor of Colorado, presiding. Dr. Howard P. Lewis, professor of medicine, University of Oregon Medical School, Portland, will be the speaker at the dinner, held at 7 p. m. at the Shirley-Savoy Hotel as part of the joint meeting of the American College of Physicians, the Medical Society of the City and County of Denver, and the Colorado State Medical Society Midwinter Clinics. Dr. Lewis, who will speak on "Reflections on the Training of Internists," is also scheduled to open the afternoon session at 2 p. m. with a discussion on "Physiological and Clinical Considerations of Various Liver Diseases" and to address the Colorado Society of Internal Medicine at its dinner at 7 p. m. the preceding evening at the University Club in Denver, when he will discuss "Electrolyte Disturbances Occurring in Congestive Heart Failure with Edema."

Review of Leukemia Research.—A new journal, *Leukemia Abstracts*, aimed at furthering research on leukemia, is announced by Mr. Herman H. Henkle, librarian of the John Crerar Library, 86 E. Randolph St., Chicago. Published monthly under the sponsorship of the Lenore Schwartz Memorial Foundation through funds given by the parents and friends of Lenore Schwartz, a victim of leukemia, the periodical consists of abstracts of the world's literature on the subject. It is sent free to medical men working in the field of blood diseases, to research workers in this field, and to medical libraries all over the world. Dr. Raphael Isaacs, Chicago, consulting editor, is assisted by an advisory committee, consisting of Drs. Howard L. Alt, George J. Anday, Israel Davidsohn, Andrew C. Ivy, Leon O. Jacobson, Louis R. Limarzi, and Karl Singer of Chicago; Dr. Charles A. Doan of Columbus, Ohio; Dr. John S. Lawrence of Los Angeles; Dr. Bernhard Steinberg of Toledo, Ohio; and Dr. Maxwell M. Wintrobe of Salt Lake City. The periodical, which is edited by Mr. Don E. Nist of the Research Information Service of Crerar Library, is compiled, printed, and distributed by the library.

Infantile Paralysis Awards.—The National Foundation for Infantile Paralysis announces approval of research and professional education projects totaling $2,586,271 in 32 medical schools, hospitals, research institutions, and educational organizations. With the exception of one institution in Canada, all the grantee organizations are located in the United States. This brings to over $40 million the amount provided in March of Dimes funds since 1938 for the study of medical care problems, aid to professional education, and the support of poliomyelitis research. Since 1938 the organization has expended an additional $148 million in meeting the costs of treatments for patients who required assistance. Included in the total amount allocated for professional education projects was $683,000 to continue the scholarship and fellowship programs in the fields of medicine and related biological and physical sciences, public health, and preventive medicine for physicians. Also to be continued are teaching fellowships in physical therapy and scholarships for physical therapists. Newly added are teaching fellowships in occupational therapy and clinical fellowships in psychology and in psychiatry to meet the urgent need for properly trained specialists in handling the treatment problems of poliomyelitis patients with respiratory involvements. In the educational projects $67,700 was approved for production of teaching films, textbooks, and other instructional aids.

Pacific Coast Surgical Association.—This association will hold its annual meeting Feb. 16-20 with headquarters at the Edmond Meany Hotel, Seattle, where moving pictures will be shown Monday morning. Luncheon at the Broadmoor Golf Club will be followed by clinics at the University of Washington Medical School and at the Rainier Club at 7 p. m. Buses will leave the Edmond Meany Hotel Tuesday at 8 a. m. for the Harrison (British Columbia) Hot Springs Hotel, where the scientific sessions will be held. Twenty-seven papers will be read, with single-author presentations being made as follows:

Clinical Study of 57 Duodenal Tumors, Eugene J. Joergenson, Glendale, Calif.
Pulmonary Embolism, Jack M. Farris, Los Angeles.
Gangrene Complicating Phlebitis, H. Rocke Robertson, Vancouver, B. C.
Mechanisms of Gas Patterns in Intestinal Obstruction, David Metheny, Seattle.
Chronic Inflammatory Lesions of the Breast, Ralph H. Loe, Seattle.
Value of Early Neurolysis in Contused Injuries of Peripheral Nerves, Howard A. Brown, San Francisco.
Leiomyomas of Stomach and Duodenum, Ralph D. Cressman, Palo Alto, Calif.
Biological Predeterminism in Gastric Carcinoma: The Limiting Factor in Surgical End Results, Ian G. Macdonald, Los Angeles.
Volvulus of the Cecum: Report of Five Cases, William Brock, Stockton, Calif.
Villous Adenomas of the Large Intestine, Ralph V. Byrne, Los Angeles.
Problems in the Management of the Acute Severe Burn, Frederic P. Shidler, Menlo Park, Calif.
Surgical Management of Chronic Stenosing Peptic Ulcerations of the Lower Esophagus, Ronald D. Pinkham, Seattle.

FOREIGN

European Nuclear Research Laboratory.—Ten European governments will cooperate in building and operating a $25 million laboratory for nuclear research to be located in Geneva, Switzerland. The participating nations are Denmark, France, the Netherlands, Italy, West Germany, Sweden, Belgium, Yugoslavia, Norway, and Switzerland. According to *Scientific American* (Dec., 1952), the European laboratory may be the first to build the superpowerful synchrotron based on the strong-focusing principle worked out at the Brookhaven National Laboratory in the United States. Its sponsors had sent Odd Dahl, Norwegian physicist, to Brookhaven to see the cosmotron. While there he learned of the strong-focusing idea and returned home to propose building a 30 billion volt machine such as the Brookhaven workers had suggested.

CORRECTION

Southeastern Allergy Meeting.—The Southeastern Allergy Association will hold its annual meeting in the Andrew Jackson Hotel, Nashville, Tenn., on May 15-16, 1953. The time and place of meeting were erroneously given in previous listings in THE JOURNAL.

Radioisotope Courses.—In the listing of postgraduate continuation courses for physicians (*J. A. M. A.* **150**:1528 [Dec. 13] 1952), under the heading "Radiology" the basic course in radioisotope techniques offered by Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tenn., which is given six times a year, lasts four weeks rather than four days, and the advanced medical course, which is tentatively scheduled for July, will last one week rather than two days.

MEETINGS

AMERICAN MEDICAL ASSOCIATION: Dr. George F. Lull, 535 North Dearborn St., Chicago 10, Secretary.

1953 Annual Session, New York, June 1-5.

1953 Clinical Session, St. Louis, Dec. 1-4.

1954 Annual Session, San Francisco, June 21-25.

1954 Clinical Session, Miami, Florida, Nov. 30-Dec. 3.

NATIONAL CONFERENCE ON RURAL HEALTH, Roanoke Hotel, Roanoke, Va., Feb. 27-28. Mrs. Arline Hibbard, 535 N. Dearborn St., Chicago 10, Secretary.

AMERICAN ACADEMY OF ALLERGY, Statler Hotel, Boston, Feb. 26-28. Dr. Ben Z. Rappaport, 55 East Washington St., Chicago, Secretary.

AMERICAN ACADEMY OF FORENSIC SCIENCES, Drake Hotel, Chicago, Feb. 26-28. Prof. Ralph F. Turner, Michigan State College, Dept. of Police Administration, East Lansing, Mich., Secretary.

AMERICAN ACADEMY OF GENERAL PRACTICE, Kiel Auditorium, St. Louis, March 23-26. Mr. Mac F. Cahal, 406 West 34th St., Kansas City 2, Mo., Executive Secretary.

AMERICAN ASSOCIATION OF ANATOMISTS, Columbus, Ohio, April 1-3. Dr. Normand L. Hoerr, 2109 Adelbert Road, Cleveland 6, Secretary.

AMERICAN ASSOCIATION OF IMMUNOLOGISTS, Congress Hotel, Chicago, April 6-10. Dr. John Y. Sugg, 1300 York Avenue, New York, Secretary.

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS, St. Louis, April 2-4. Dr. Alan R. Moritz, 2085 Adelbert Road, Cleveland 6, Secretary.

AMERICAN ASSOCIATION OF RAILWAY SURGEONS, Drake Hotel, Chicago, April 7-9. Dr. Chester C. Guy, 5800 Stony Island Ave., Chicago 37, Secretary.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Fairmont Hotel, San Francisco, March 27-30. Dr. Paul C. Samson, 2938 McClure St., Oakland 9, Calif., Secretary.

AMERICAN HEART ASSOCIATION, Hotel Chelsea, Atlantic City, N. J., April 8-12. Dr. Charles D. Marple, 44 East 23d St., New York 10, Medical Director.

AMERICAN ORTHOPSYCHIATRIC ASSOCIATION, Hotel Statler, Cleveland, Feb. 23-25. Dr. Exie E. Welsch, 303 Lexington Ave., New York 16, Secretary.

AMERICAN PHYSIOLOGICAL SOCIETY, Conrad Hilton Hotel, Chicago, April 6-10. Dr. E. F. Adolph, Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y., Secretary.

AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, Conrad Hilton Hotel, Chicago, April 6-10. Dr. Elmer H. Stotz, 260 Crittenden Blvd., Rochester, N. Y., Secretary.

AMERICAN SOCIETY FOR EXPERIMENTAL PATHOLOGY, Chicago, April 6-9. Dr. Russell L. Holman, 1542 Tulane Ave., New Orleans 12, Secretary.

AMERICAN SOCIETY FOR PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS, Conrad Hilton Hotel, Chicago, April 6-10. Dr. Carl C. Pfeiffer, 1853 W. Polk St., Chicago 12, Secretary.

AMERICAN SURGICAL ASSOCIATION, Hotel Statler, Los Angeles, April 1-3. Dr. Nathan A. Womack, Dept. of Surgery, School of Medicine, Univ. of N. C., Chapel Hill, N. C., Secretary.

ATLANTA GRADUATE MEDICAL ASSEMBLY, Atlanta-Biltmore Hotel, Atlanta, Ga., Feb. 23-25. Dr. Mark S. Dougherty, 15 Peachtree St. N.W., Atlanta, Ga., Chairman.

CENTRAL SURGICAL ASSOCIATION, Drake Hotel, Chicago, March 5-7. Dr. Robert M. Zollinger, University Hospital, Columbus 10, Ohio, Secretary.

CHICAGO MEDICAL SOCIETY ANNUAL CLINICAL CONFERENCE, Palmer House, Chicago, March 3-6. Dr. Maurice M. Hoeltgen, 86 East Randolph St., Chicago 1, Secretary.

DALLAS SOUTHERN CLINICAL SOCIETY, Baker and Adolphus Hotels, Dallas, Texas, Mar. 16-19. Dr. T. Haynes Harvill, 433 Medical Arts Bldg., Dallas 1, Secretary.

FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY, Blackstone, Congress, Conrad Hilton hotels and Palmer House, Chicago, April 6-10. Dr. M. O. Lee, 2101 Constitution Avenue, Washington 25, D. C., Secretary.

MICHIGAN CLINICAL INSTITUTE, Sheraton Hotel, Detroit, March 11-13. Dr. J. M. Robb, 606 Townsend St., Lansing 15, Mich., General Chairman.

NATIONAL MULTIPLE SCLEROSIS SOCIETY, New York, March 10. Miss Sylvia Lawry, 270 Park Ave., New York 17, Executive Secretary.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS, Hotel Statler, New York, March 18-20. Dr. Franklin M. Foote, 1790 Broadway, New York 19, Executive Director.

NEW ENGLAND SOCIETY OF ANESTHESIOLOGISTS, Boston, April 3. Dr. Francis J. Audin, 114 Danehill Rd., Newton Highlands 61, Mass., Secretary.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, Municipal Auditorium, New Orleans, March 2-5. Dr. Woodward D. Beacham, 1430 Tulane Avenue, New Orleans 12, Secretary.

NORTH PACIFIC SOCIETY OF NEUROLOGY AND PSYCHIATRY, Portland, Ore., April 10-11. Dr. Robert A. Coen, 218 Mayer Bldg., Portland 5, Ore., Secretary.

PACIFIC COAST SURGICAL ASSOCIATION, Seattle and Harrison, Hot Springs, B. C., Feb. 16-20. Dr. Carleton Mathewson Jr., Stanford University Hospital, San Francisco, Secretary.

REGIONAL MEETINGS, AMERICAN COLLEGE OF PHYSICIANS:

COLORADO, Denver, February 17, Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Executive Secretary.

DELAWARE, Wilmington, Feb. 27. Mr. E. R. Loveland, 4200 Pine St., Philadelphia, Executive Secretary.

KANSAS, Kansas City, March 20. Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Executive Secretary.

NEBRASKA, Omaha, February 28. Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Executive Secretary.

VIRGINIA, Veterans Administration Hospital, Hampton, Feb. 26. Dr. John B. McKee, 114 West Boscawen St., Winchester, Chairman.

SECTIONAL MEETINGS, AMERICAN COLLEGE OF SURGEONS:

ATLANTA, Ga., The Atlanta Biltmore, Feb. 23-24. Dr. William G. Hamm, 384 Peachtree St. N.E., Atlanta, Chairman.

BOSTON, Statler Hotel, March 2-5. Dr. Samuel F. Marshall, 605 Commonwealth Ave., Boston, Chairman.

SALT LAKE CITY, Utah Hotel, Mar. 20-21. Dr. John H. Clark, 349 East First Street South, Salt Lake City, Chairman.

OKLAHOMA CITY, Oklahoma-Biltmore Hotel, March 24-25. Dr. C. E. Clymer, 117 North Broadway, Oklahoma City, Chairman.

LOS ANGELES, Statler Hotel, March 30-31. Dr. Ewing L. Turner, 1930 Wilshire Blvd., Los Angeles, Chairman.

SIOUX VALLEY MEDICAL ASSOCIATION, Sioux City, Iowa, Feb. 24-26. Dr. Edward H. Sibley, 622 Fourth St., Sioux City 9, Secretary.

SOCIETY OF NEUROLOGICAL SURGEONS, Roosevelt Hotel, New Orleans, March 19-21. Dr. Edgar F. Fincher, Emory University, Ga., Secretary.

SOUTHEASTERN SURGICAL CONGRESS, Louisville, Ky., March 9-12. Dr. Benjamin T. Beasley, 45 Edgewood Ave. S.E., Atlanta 3, Ga., Secretary.

U. S. CHAPTER, INTERNATIONAL COLLEGE OF SURGEONS, SURGICAL DIVISION MEETINGS:

ST. LOUIS, Statler Hotel, March 31-April 2. Dr. Roland Klemme, 4952 Maryland Ave., St. Louis 8, Chairman.

UNITED STATES-MEXICO BORDER PUBLIC HEALTH ASSOCIATION, El Paso, Texas, March 26-27. Dr. J. Ellington, 314 U. S. Court House, El Paso, Texas, Secretary.

FOREIGN

BRITISH MEDICAL ASSOCIATION, Cardiff, S. Wales, July 13-17. Dr. A. MacCrae, B. M. A. House, Tavistock Square, London W.C.1, England, Secretary.

CANADIAN MEDICAL ASSOCIATION, Winnipeg, Manitoba, Canada, June 15-19. Dr. T. C. Routley, 135 St. Clair Avenue W., Toronto 5, Ontario, Canada, General Secretary.

CONGRESS OF INTERNATIONAL LEAGUE AGAINST RHEUMATISM, Geneva and Zurich, Switzerland, Aug. 24-29. For information write: Dr. W. Tegner, The London Hospital, London E.1, England.

CONGRESS OF THE INTERNATIONAL SOCIETY OF ANGIOLOGY, Lisbon, Portugal, Sept. 18-20. Dr. Henry Haimovici, 105 East 90th St., New York 28, N. Y., U. S. A., Secretary.

CONGRESS OF THE INTERNATIONAL SOCIETY OF SURGERY, Lisbon, Portugal, Sept. 14-20. Dr. L. Dejardin, 141, rue Belliard, Brussels, Belgium, General Secretary.

EUROPEAN CONGRESS OF ALLERGOLOGY, Stockholm, Sweden, May 20-23. For information write: Dr. Egon Brunn, Gersonavej 8, Hellerup, Copenhagen, Denmark.

INTERNATIONAL CONFERENCE ON THROMBOSIS AND EMBOLISM, Basle, Switzerland, July 15-19, 1954. Dr. W. Merz, Chief Medical Officer, Gynecological Clinic, University of Basle, Basle, Switzerland, Hon. Secretary.

INTERNATIONAL CONGRESS OF AUDIOLOGY, Groningen, Netherlands, June 5-6. Dr. Gunnar Holmgren, Strandvagen 5A, Stockholm, Sweden, President.

INTERNATIONAL CONGRESS OF ELECTROENCEPHALOGRAPHY AND CLINICAL NEUROPHYSIOLOGY, Boston, Mass., U. S. A., Aug. 18-21. Dr. Robert S. Schwab, Massachusetts General Hospital, Boston 14, Mass., U. S. A., Secretary-General.

INTERNATIONAL CONGRESS OF GYNECOLOGY, Geneva, Switzerland, July 21-26, 1954. Dr. Maurice Fabre, 1, rue Jules-Lefebore, Paris IXe, France, General Secretary.

INTERNATIONAL CONGRESS OF HIPPOCRATIC MEDICINE, Evian, France, Sept. 3-6. Prof. P. Delore, 13 rue Jarente, Lyons, France, Secretary-General.

INTERNATIONAL CONGRESS FOR HISTORY OF SCIENCE, Jerusalem, Israel, August 3-7. Prof. F. S. Bodenheimer, Hebrew University, Jerusalem, Israel, President.

INTERNATIONAL CONGRESS OF INTERNATIONAL COLLEGE OF SURGEONS, Sao Paulo, Brazil, April 26-May 2. 1954. Dr. Max Thorek, 1516 Lake Shore Drive, Chicago, Illinois, U.S.A., Secretary-General

INTERNATIONAL CONGRESS ON MEDICAL LIBRARIANSHIP, London, England, July 20-25. Mr. W. R. LeFanu, % London School of Hygiene and Tropical Medicine, Keppel Street, London, W.C.1, England, Chairman.

INTERNATIONAL CONGRESS ON MENTAL HEALTH, University of Toronto, Toronto, Ontario, Canada, Aug. 14-21, 1954. For information write: Executive Officer, International Congress on Mental Health, 111 St. George St., Toronto, Ontario, Canada.

INTERNATIONAL CONGRESS OF MICROBIOLOGY, Rome, Italy, Sept. 6-12. For information write: Dr. V. Puntoni, Citta Universitaria, Rome, Italy.

INTERNATIONAL CONGRESS OF OTO-NEURO-OPHTHALMOLOGY, Bologna, Italy, May 3-7. Dr. Guiseppe Cristini, Clinica Oculistica, Policlinico, Bologna, Italy, General Secretary.

INTERNATIONAL CONGRESS OF OTORHINOLARYNGOLOGY, Amsterdam, Netherlands, June 8-15. Dr. W. H. Struben, J. J. Viottastraat 1, Amsterdam, Netherlands, Secretary.

INTERNATIONAL CONGRESS OF PAEDIATRICS, Havana, Cuba, Oct. 12-17. Prof. Felix Hurtado, 5a Avenue 124, Miramar, Havana, Cuba, President.

INTERNATIONAL CONGRESS OF RADIO-BIOLOGY, Copenhagen, Denmark, July 14-25. Prof. Flemming Norgaard, Oster Voldgade 10, Copenhagen K, Denmark, Secretary General.

INTERNATIONAL CONGRESS OF RADIOLOGY, Copenhagen, Denmark, July 19-25. Professor Flemming Norgaard, 10 Oster Voldgade, Copenhagen K, Denmark, Secretary General.

INTERNATIONAL CONGRESS OF THALASSOTHERAPY, Dubrovnick, Yugoslavia, May 17-25. Prof. C. Plavaic, Mavrodne Republick 51, Belgrade, Yugoslavia, Secretary General.

INTERNATIONAL CONGRESSES OF TROPICAL MEDICINE AND MALARIA, Istanbul, Turkey, Aug. 28-Sept. 4. Professor Dr. Ihsan Sükrü Aksel, Tunel Meydam, Beyoglu, Istanbul, Turkey, General Secretary.

INTERNATIONAL FERTILITY ASSOCIATION, Henry Hudson Hotel, New York, N. Y., U. S. A., May 25-31. Dr. Abner I. Weisman, 1160 Fifth Avenue, New York 29, N. Y., U. S. A., Associate Secretary General.

INTERNATIONAL GYNAECOLOGICAL MEETING, Paris, France, May 22-23. For information write: Dr. Jacques Courtois, 1, rue Racine, St. Germain-en-Laye, Seine et Oise, France.

INTERNATIONAL HOSPITAL CONGRESS, London, England, May 25-30. Capt. J. E. Stone, 10 Old Jewry, London, EC2, England, Hon. Secretary.

INTERNATIONAL LEPROSY CONGRESS, Madrid, Spain, Oct. 3-10. Dr. Felix Contreras, Moreto 15, Madrid, Spain, Secretary.

INTERNATIONAL PHYSIOLOGICAL CONGRESS, Montreal, Canada, Aug. 31-Sept. 4. Dr. A. S. V. Burgen, Dept. of Physiology, McGill University, Montreal, Canada, Secretary.

INTERNATIONAL PSYCHO-ANALYTICAL CONGRESS, Bedford College, Regent's Park, London N.W.1, England, July 26-30. Dr. Ruth S. Eissler, 285 Central Park West, New York 24, N. Y., Hon. Secretary.

INTERNATIONAL VETERINARY CONGRESS, Stockholm, Sweden, Aug. 9-15. Prof. Axel Isaksson, Institute of Veterinary Medicine, Stockholm 50, Sweden, Secretary.

PACIFIC SCIENCE CONGRESS, Quezon City and Manila, Philippines, Nov. 16-28. Dr. Patrocinio Valenzuela, College of Pharmacy, University of the Philippines, Quezon City, Philippines, Secretary-General.

PAN AMERICAN CONGRESS OF THE MEDICAL PRESS, Buenos Aires, Argentine, July 12-16. Secretaria del Congress, 763 Uriburu, Buenos Aires, Argentine.

PHILIPPINE MEDICAL ASSOCIATION, Manila, April 19-26. Dr. Manuel D. Penas, Doctor's Hospital, 707 Vermont St., Manila, Philippines, Secretary.

WORLD CONFERENCE ON MEDICAL EDUCATION, British Medical Association House, Tavistock Square, W.C.1, London, England, Aug. 24-29. Secretariat: World Medical Association, 2 East 103d St., New York 29, N. Y., U. S. A.

WORLD CONGRESS OF THE WORLD CONFEDERATION FOR PHYSICAL THERAPY, London, England, Sept. 7-12. Miss M. J. Neilson, Chartered Society of Physiotherapy, Tavistock House, South, Tavistock Square, London, W.C.1, England, Secretary.

WORLD MEDICAL ASSOCIATION, The Hague, Amsterdam, Holland, Aug. 31-Sept. 7. Dr. Louis H. Bauer, 2 East 103d St., New York 29, N. Y., Secretary-General.

EXAMINATIONS AND LICENSURE

BOARDS OF MEDICAL EXAMINERS

ALABAMA: *Examination.* Montgomery, June 23-25. Sec., Dr. D. G. Gill, 537 Dexter Ave., Montgomery.

ALASKA:* *Examination.* Juneau, March 3. On application in other towns where there are board members. *Reciprocity.* On application. Sec., Dr. W. M. Whitehead, Box 140, Juneau.

ARKANSAS:* *Regular. Examination.* Little Rock, June 18-19. Sec., Dr. Joe Verser, Harrisburg. *Homeopathic. Examination.* Little Rock, April 6. Sec., Dr. Carl S. Bungart, 105 North 14th St., Ft. Smith. *Eclectic.* Little Rock, June 4-5. Sec., Dr. Frank C. Smith, 2301 Broadway, Little Rock.

CALIFORNIA: *Examination.* Los Angeles, March 2-5. Sec., Dr. Frederick N. Scatena, 1020 N Street, Sacramento.

CONNECTICUT:* *Medical.* Hartford, March 10-11. Sec., Dr Creighton Barker, 160 St. Ronan St., New Haven. *Homeopathic.* Derby, March 10-11. Sec., Dr. Donald A. Davis, 38 Elizabeth St., Derby.

FLORIDA:* Jacksonville, June 28-30. Sec., Dr. Homer Pearson, 701 Dupont Bldg., Miami.

GEORGIA: *Examination.* Atlanta and Augusta, June. *Reciprocity.* Atlanta, June. Sec., Mr. R. C. Coleman, 111 State Capitol, Atlanta.

GUAM: The Commission on Licensure will meet whenever a candidate appears or submits his credentials. Ex. Sec., Dr. Austin W. Matthis, Agana.

INDIANA: *Examination.* Indianapolis, June 23-25. Ex. Sec., Miss Ruth V. Kirk, 538 K of P Bldg., Indianapolis.

KANSAS: Kansas City, June 10-11. Sec., Dr. O. W. Davidson, 864 New Brotherhood Bldg., Kansas City.

MAINE: Portland, March 10-11. Sec., Dr. Adam P. Leighton, 192 State St., Portland.

MINNESOTA:* Minneapolis, April 21-23. Sec., Dr. J. F. DuBois, 230 Lowry Medical Arts Bldg., St. Paul 2.

MONTANA: *Examination.* Helena, April 7-8. *Reciprocity.* Helena, April 6. Sec., Dr. S. A. Cooney, 7 West 6th Ave., Helena.

NEBRASKA:* *Examination.* Omaha, June 1953. Director, Mr. Husted K. Watson, Room 1009 State Capitol Bldg., Lincoln 9.

NEW HAMPSHIRE: Concord, March 11-12. Sec., Dr. John S. Wheeler, 107 State House, Concord.

NEW JERSEY: Trenton, June 16-19. Sec., Dr. Earl S. Hallinger, 28 West State St., Trenton.

NEW MEXICO:* Santa Fe, April 13-14. Sec., Dr. R. C. Derbyshire, 227 E. Palace Ave., Santa Fe.

NORTH CAROLINA: *Reciprocity.* Pinehurst, May 11. Sec., Dr. Joseph J. Combs, 716 Professional Bldg., Raleigh.

OHIO: *Examination.* Columbus, June 15-17. *Reciprocity.* Columbus, April 7. Sec., Dr. H. M. Platter, 21 W. Broad, Columbus 15.

OKLAHOMA:* *Examination.* Oklahoma City, June 10-11. Sec., Dr. Clinton Gallaher, 813 Braniff Bldg., Oklahoma City.

SOUTH DAKOTA:* Rapid City, June 17-18. Sec., Dr. C. B. McVay, Yankton Clinic, Yankton.

TENNESSEE:* *Examination.* Memphis, March 25-26. Sec., Dr. H. W. Qualls, 1635 Exchange Bldg., Memphis 3.

TEXAS:* Fort Worth, June 22-24. Sec., Dr. M. H. Crabb, 1714 Medical Arts Bldg., Ft. Worth 2.

UTAH: *Examination.* Salt Lake City, July. Asst. Dir., Mr. Frank E. Lees, 324 State Capitol Bldg., Salt Lake City.

VIRGIN ISLANDS: *Examination.* St. Thomas, June 10-11. Sec., Dr. Earle M. Rice, Box 8, St. Thomas.

WYOMING: Examinations are regularly scheduled the first Monday of February, June and October of each year. Sec., Dr. Franklin D. Yoder, State Office Bldg., Cheyenne.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

ALASKA: On application. Juneau or other towns in Territory as decided by Board. *Reciprocity.* On application. Sec., Dr. C. Earl Albrecht, Box 1931, Juneau.

ARKANSAS: *Examination.* Little Rock, May 5-6. Sec., Mr. Louis E. Gebauer, 1002 Donaghey Bldg., Little Rock.

COLORADO: Denver, March 4-5. Sec., Dr. Esther B. Starks, 1459 Ogden St., Denver 18.

FLORIDA: *Examination.* Gainesville, June 6. Sec., Mr. M. W. Emmel, Box 340, University of Florida, Gainesville.

NEW MEXICO: *Examination.* Santa Fe, March 15. Sec., Mrs. Marguerite Cantrell, P. O. Box 1592, Santa Fe.

OKLAHOMA: Oklahoma City, April 3. Sec., Dr. Clinton Gallaher, 813 Braniff Bldg., Oklahoma City.

OREGON: *Examination.* Portland, March 7. Sec., Dr. Charles D. Byrne, University of Oregon, Eugene.

TEXAS: *Examination.* Dallas and Galveston, April. Sec., Bro. Raphael Wilson, 407 Perry Brooks Bldg., Austin.

WISCONSIN: *Examination.* Madison, April 11. Final date for filing application is April 4. Milwaukee, June 13. Final date for filing application is June 6. Sec., Dr. W. H. Barber, 621 Ransom St., Ripon.

* Basic Science Certificate required.

DEATHS

Hedley, Oswald Fenton ✤ medical director, U. S. Public Health Service, Washington, D. C.; born in Danville, Va., May 18, 1903; Medical College of Virginia, Richmond, 1928; specialist certified by the American Board of Preventive Medicine and Public Health; fellow of the American College of Physicians; commissioned in the public health service in 1928; in 1944 appointed medical director of the health division of the United Nations Relief and Rehabilitation Agency and later that year was detailed to Supreme Headquarters, Allied Expeditionary Forces, to direct public health operations in Germany; while stationed in Public Health Service District No. 2 in Richmond, Va., spent a month in Yemen, observing medical and health conditions and serving as medical consultant to the Iman (king) of Yemen; in 1947 named director of the public health division of the American Mission to Greece, returning to the United States in 1950; appointed to the Mutual Security Agency in 1951, serving as medical director; at the time of his death was public health adviser to the Far East Programs Division of Mutual Security Agency; died Nov. 18, aged 49, of coronary occlusion.

Horney, Karen ✤ New York City; born in Hamburg, Germany, Sept. 16, 1885; Friedrich-Wilhelms-Universität Medizinische Fakultät, Berlin, Prussia, Germany, 1915; dean and founder, American Institute for Psychoanalysis; at one time associate director of the Institute for Psychoanalysis in Chicago; formerly clinical professor of psychoanalysis at New York Medical College, Flower and Fifth Avenue Hospitals; member of the American Psychiatric Association and the Association for the Advancement of Psychoanalysis; author of "Neurotic Personality of Our Times," "New Ways in Psychoanalysis," "Self Analysis," "Our Inner Conflicts," and "Neurosis and Human Growth"; editor and contributor, "Are You Considering Psychoanalysis"; editor of the *American Journal of Psychoanalysis;* died in the Harkness Pavilion, Columbia-Presbyterian Medical Center, Dec. 4, aged 67, of carcinoma of the gallbladder.

Buford, Robert King ✤ Charleston, W. Va.; born in Albertville, Ala., in 1894; Bennett Medical College, Chicago, 1915; also a graduate in pharmacy; member of the founders group of the American Board of Surgery; member of the Council of the Southeastern Surgical Congress; fellow of the International College of Surgeons and the American College of Surgeons; past president of the West Virginia State Medical Association; served during World War I; during World War II chairman of the West Virginia Procurement and Assignment Committee for physicians, dentists, and veterinarians; on the staff of the Charleston General Hospital; died Dec. 25, aged 58, of coronary occlusion and cerebral embolus.

Jaffin, Abraham Ezra ✤ Jersey City, N. J.; born Jan. 22, 1884; Columbia University College of Physicians and Surgeons, New York, 1905; specialist certified by the American Board of Internal Medicine; past president of the Hudson County Medical Society and the New Jersey Tuberculosis League; member of the American Trudeau Society; fellow of the American College of Physicians; served during World War I; consulting physician and chief of clinics, Berthold S. Pollak Hospital for Chest Diseases; consulting physician, Bayonne Hospital and Dispensary; attending physician, Jersey City Medical Center, where he died Nov. 25, aged 68, of gastric cancer.

Sharp, James Clayton, Westbury, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1901; member of the American Association of Anatomists; formerly associate professor of anatomy and history at his alma mater and assistant professor of anatomy at Long Island College Hospital; for many years on the faculty of Brooklyn Diocesan Seminary, Huntington, N. Y., where he taught physiology and anatomy; served overseas during World War I; affiliated with Veterans Administration in New York City; died in Nassau Hospital, Mineola, Dec. 5, aged 73, of coronary occlusion.

✤ Indicates Member of the American Medical Association.

Adair, Templeton, Mount Hope, W. Va.; Jefferson Medical College of Philadelphia, 1908; served as superintendent of the Oak Hill Hospital; died in Beckley (W. Va.) Hospital Dec. 12, aged 70, of lymphatic leukemia.

Alderson, Harry Everett ✤ San Francisco; Medical Department of the University of California, San Francisco, 1900; clinical professor of medicine (dermatology and syphilology) emeritus, Stanford University School of Medicine; specialist certified by the American Board of Dermatology and Syphilology; member of the American Dermatological Association and the American Academy of Dermatology and Syphilology; affiliated with St. Mary's Hospital; died Dec. 13, aged 74, of carcinoma of the colon with metastases.

Best, Henry Blount, Wilson, N. C.; University of North Carolina School of Medicine, Chapel Hill, 1907; died Oct. 6, aged 69.

Darling, Ulysses Grant ✤ Chicago; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1890; an Associate Fellow of the American Medical Association; died Dec. 15, aged 86, of cerebral hemorrhage.

Gates, Wright Addison ✤ Logan, W. Va.; University of Minnesota Medical School, Minneapolis, 1941; released as a major in the medical corps of the U. S. Army after serving nine years; affiliated with Logan General Hospital; accidentally drowned Dec. 16, aged 42.

Giles, Jackson Therman ✤ Valdosta, Ga.; University of Georgia School of Medicine, Augusta, 1943; served during World War II; died Nov. 4, aged 34.

Gray, Robert Howe ✤ Westport, N. Y.; Long Island College Hospital, Brooklyn, 1909; past president of the Essex County Medical Society; formerly county coroner; served during World War I; on the staff of the Community Hospital in Elizabethtown, where he died Nov. 27, aged 67, of cerebral thrombosis.

Gustafson, Robert Kenneth ✤ Pasadena, Calif.; Johns Hopkins University School of Medicine, Baltimore, 1926; fellow of the American College of Surgeons; served during World War I; on the staff of Huntington Memorial Hospital; died Dec. 16, aged 61, of coronary occlusion.

Harriman, Samuel S., Lyndon, Ill.; Kentucky School of Medicine, Louisville, 1892; died Nov. 13, aged 89.

Harvey, Orlando Emery ✤ Lima, Ohio; Ohio State University College of Medicine, Columbus, 1912; served on the staffs of the Beverly Hills Sanatorium in Memphis, Tenn., and the District Tuberculosis Hospital, where he was superintendent and medical director; author of "Bouquets and Rhyme"; affiliated with Memorial Hospital and St. Rita's Hospital, where he died Nov. 27, aged 65, of coronary thrombosis.

Holtash, Frederick John ✤ Huntington, W. Va.; Medizinische Fakultät der Universität, Vienna, Austria, 1910; specialist certified by the American Board of Ophthalmology; member of the American Academy of Ophthalmology and Otolaryngology; served during World War I; affiliated with Huntington Memorial and St. Mary's hospitals; died Nov. 29, aged 69, of a heart attack.

Kahle, L. N., Elm Grove, W. Va. (licensed in West Virginia in 1901); died Nov. 27, aged 75, of pneumonia.

Kalish, Jacob ✤ Brooklyn; University and Bellevue Hospital Medical College, New York, 1906; specialist certified by the American Board of Pediatrics; affiliated with Beth Moses Hospital and Maimonides Hospital, where he died Dec. 5, aged 75, of metastatic carcinoma of the liver, primary site undetermined.

Logan, Arthur H. ✤ Rockville Centre, N. Y.; Queen's University Faculty of Medicine, Kingston, Ontario, Canada, 1931; affiliated with Mercy and South Nassau Communities hospitals; died Nov. 14, aged 50, of coronary occlusion.

Matthews, Frank Cameron ✦ Chester, Conn.; Columbia University College of Physicians and Surgeons, New York, 1902; member of the Medical Society of the State of New York; died recently, aged 79, of cerebral thrombosis, arteriosclerosis, and heart disease.

Nash, Neely Leon, Tupelo, Miss.; University of Nashville (Tenn.) Medical Department, 1909; died Nov. 21, aged 68, of hemiplegia, cerebral hemorrhage, and arteriosclerosis.

O'Connor, Peter Paul ✦ Chicago; Chicago College of Medicine and Surgery, 1917; served during World War I; for many years on the staff of Henrotin Hospital; president of the Frank B. Lomax Company; died in Columbus Hospital Dec. 11, aged 60, of arteriosclerosis and ruptured aneurysm of the aorta.

Paquin, Henry Osmond Jr., Clarksville, N. Y.; Tufts College Medical School, Boston, 1944; formerly on the faculty of Albany (N. Y.) Medical College; specialist certified by the American Board of Pathology; served during World War II; at one time on the staff of Albany (N. Y.) Hospital; affiliated with St. Mary's Hospital in Troy, where he died Dec. 1, aged 34, of acute myelogenous leukemia.

Penland, Hugh Elmer, Berkeley, Calif.; University of California Medical School, San Francisco, 1917; died Nov. 23, aged 72, of coronary thrombosis.

Petrakos, Andrew Athanasios ✦ Chicago; National University of Athens School of Medicine, Greece, 1923; on the staffs of the Roseland Community Hospital and the American Hospital, where he died Nov. 28, aged 54, of carcinoma of the rectum.

Piper, Rena Kate, San Francisco; Johns Hopkins University School of Medicine, Baltimore, 1920; at one time on the faculty of the University of California Medical School; for many years member of the city board of health; formerly affiliated with Children's Hospital; died Nov. 6, aged 58, of heart disease.

Pyles, Franklin Pierce, Rio de Janeiro, Brazil, South America; University of Pennsylvania School of Medicine, Philadelphia, 1909; fellow of the American College of Surgeons; served as medical director of the Strangers' Hospital; died in St. Luke's Hospital, New York, Nov. 18, aged 70.

Quinn, Joseph Vincent ✦ Los Angeles; St. Louis University School of Medicine, 1927; served in World War II; affiliated with Queen of Angels Hospital; shot and killed Nov. 7, aged 49.

Quinn, William Vincent ✦ Utica, N. Y.; University and Bellevue Hospital Medical College, New York, 1901; an Associate of the American Medical Association; for many years examining physician for the Utica schools; on the staff of St. Elizabeth Hospital; died Dec. 17, aged 77, of coronary thrombosis.

Ricks, Fred Lee, Drew, Miss.; University of Tennessee College of Medicine, Memphis, Tenn., 1915; during World War II served overseas where he won the British Military Cross and the Purple Heart; died in Veterans Administration Hospital (Kennedy), Memphis, Nov. 19, aged 65, of cerebral thrombosis.

Robinson, Edward H., Lawrenceville, Ill.; Missouri Medical College, St. Louis, 1880; formerly practiced in Chicago, where he was affiliated with the Englewood Hospital; died in Lawrence County Memorial Hospital Nov. 30, aged 94, of carcinoma of the sigmoid.

Rosenberg, Maurice, New York; Columbia University College of Physicians and Surgeons, New York, 1899; served on the staffs of the Beth Israel Hospital and the People's Hospital; died in New York Hospital Nov. 9, aged 79, of postoperative retropubic prostatectomy.

Sima, Charles Arthur ✦ Chicago; University of Illinois College of Medicine, Chicago, 1913; formerly assistant clinical professor of medicine at Rush Medical College; affiliated with Hospital of St. Anthony de Padua, where he died Dec. 9, aged 64, of coronary thrombosis.

Speer, Grant Gould ✦ Los Angeles; Detroit College of Medicine, 1892; an Associate Fellow of the American Medical Association; died Oct. 17, aged 87, of arteriosclerotic heart disease.

Stowe, Harold Robert ✦ Council Bluffs, Iowa; University of Nebraska College of Medicine, Omaha, 1941; member of the Alumni Association of the Mayo Foundation and the Minnesota State Medical Association; served during World War II; formerly a fellow in surgery at the Mayo Foundation in Rochester, Minn.; died Dec. 1, aged 35.

Sturgis, Robert Washington ✦ Norfolk, Va.; University of Maryland School of Medicine, Baltimore, 1896; medical consultant at Tidewater Regional Blood Bank; at one time chairman of the Norfolk County Board of Supervisors; served on the staff of the Leigh Memorial Hospital; died Nov. 17, aged 82, of cerebral hemorrhage.

Swick, Jesse Howard, Beaver Falls, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1906; served overseas during World War I; formerly U. S. Congressman; affiliated with Beaver Valley General Hospital in New Brighton and the Providence Hospital; a director of the Moltrup Steel Products Company and Peoples Savings and Loan Association; died Nov. 17, aged 73, of coronary disease.

Taylor, William Warren ✦ Whitefish, Mont.; University of Minnesota College of Medicine and Surgery, Minneapolis, 1900; for many years chairman of the school board; formerly secretary of the Flathead County Medical Society, and treasurer and first vice-president of the Montana State Medical Association; formerly county coroner; served as division physician and surgeon for the Great Northern Railway; died in Kalispell (Mont.) General Hospital Nov. 14, aged 80, of coronary occlusion.

Tuttle, Henry Gould, Daytona Beach, Fla.; Long Island College Hospital, Brooklyn, 1892; formerly practiced in Brooklyn, and served as assistant medical director for the Metropolitan Life Insurance Company in New York City; died Nov. 18, aged 86, of uremia and arteriosclerosis.

Tyson, George F. M., Evanston, Ill.; National Medical University, Chicago, 1898; died in Evanston Hospital Jan. 8, aged 80, of cerebral hemorrhage.

Walker, George Washington ✦ Del Monte, Calif.; Barnes Medical College, St. Louis, 1897; an Associate Fellow of the American Medical Association; specialist certified by the American Board of Otolaryngology; fellow of the American College of Surgeons; past president of the Fresno County Medical Society; formerly practiced in Fresno, where he served on the board of education; died in Pacific Grove Nov. 1, aged 76.

Wheeler, Lucia Anna ✦ Uxbridge, Mass.; Woman's Medical College of Pennsylvania, Philadelphia, 1898; member of the American Psychiatric Association; died Nov. 25, aged 83.

Wheeler, Lyman Hall ✦ Lockport, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1897; served during World War I; for many years health officer and city physician; medical consultant of the Niagara County Welfare Department; formerly coroner; died in the Veterans Administration Hospital, Buffalo, Nov. 6, aged 80, of myocardial infarction.

Yancey, Burbridge Scott ✦ Harrisonburg, Va.; University of Virginia Department of Medicine, Charlottesville, 1926; fellow of the American College of Physicians; formerly examining physician of the Rockingham County Selective Service Board and chairman of the city board of health; affiliated with Rockingham Memorial Hospital; died Nov. 9, aged 50.

Young, Robert Simonton ✦ Los Angeles; Columbia University College of Physicians and Surgeons, New York, 1919; specialist certified by the American Board of Urology; member of the Ohio State Medical Association and the American Urological Association; died Nov. 5, aged 66, of carcinoma.

DIED WHILE IN MILITARY SERVICE

Leichtle, Gerald Herman, Theresa, Wis.; University of Wisconsin Medical School, Madison, 1950; interned at Milwaukee County Hospital in Milwaukee; captain, U. S. Army Air Force Reserve; killed Sept. 30, aged 29, in an ambulance accident, while at Oscoda Air Force Base, Oscoda, Mich.

GOVERNMENT SERVICES

NAVY

Course in Aviation Medicine.—A class in aviation medicine will convene at the Naval School of Aviation Medicine, Pensacola, Fla., on April 6. The course is of about six months' duration, and candidates successfully completing it will be designated as Navy flight surgeons. The class will be limited to 32 medical officers of the Regular Navy and Reserve of the rank of lieutenant commander and below. There is an urgent need for flight surgeons in the air arm of the Navy, and all eligible medical officers are requested to consider this new and growing field of medicine as a specialty for their naval career. Aviation medicine offers to the medical officer diversified opportunities for naval medical experience. Duty with aviation units afford general medical practice in addition to special opportunities for practice in otolaryngology, ophthalmology, physiology, psychiatry, as well as research and other specialty fields. Medical officers desiring to enroll for this course should apply to the chief of the Bureau of Medicine and Surgery (Aviation Medicine Division) and include in the request the following agreement of obligation: "I agree to remain on active duty for one year following completion of the course or for six months beyond my obligated service, whichever is longer."

Fatal Automobile Accidents During Holiday Period.—Sixty-eight Navy and Marine Corps personnel were killed in the United States as a result of automobile accidents during the 35 day period Dec. 1, 1952, through Jan. 4, 1953, Admiral Pugh, the Surgeon General, reported Jan. 28. The Surgeon General said, "Two salient facts relative to these accidents stand out. First, practically all the accidents occurred while the personnel were on leave or liberty—away from their station of duty; and second, a large proportion of the accidents occurred on week ends and holidays." The Surgeon General said that in 1923 five deaths due to motor vehicle accidents were reported, but by 1930 deaths resulting from automobile accidents replaced drownings as a leading cause of accidental deaths in the Navy. In 1950 there were 406 deaths due to motor vehicle accidents, over twice the number of deaths from all diseases. Eighty-eight per cent of these fatal accidents occurred while the personnel were on leave or liberty. The Surgeon General continued: "In an effort to cope with this problem the Navy and Marine Corps are taking definite action. For instance, many newspapers issued by naval activities print motor vehicle accident statistics and the feature 'Hints on Safe Driving.' In addition, visual aids of all kinds are used. Posters are placed on bulletin boards throughout the stations to catch attention and impress on all naval personnel the importance of safe driving, both on and off military reservations. Furthermore, some naval activities have arranged an off-duty course of instruction in safe driving for their personnel."

Course in Isotopes and Military Medicine.—A course in special weapons, isotopes, and military medicine for medical department officers in the 11th, 12th, and 13th Naval districts will be held at the Naval Station, Treasure Island, San Francisco, March 2-6. The course will present problems likely to be confronted and techniques to be employed in the field of radioactivity. The subjects will be presented by speakers of outstanding prominence in their specialties. Although this course is primarily for reserve medical department officers serving on inactive duty, officers on active duty may be given authorization orders in accordance with current instructions. Inactive Naval Reserve Medical, Dental, Medical Service, Nurse, and Hospital Corps officers in these naval districts who desire to attend should submit their requests for six days' active duty for training to their commandant's office at the earliest date. Acceptance of orders to attend this course will not, in any way, increase the possibility of involuntary call to active service.

VETERANS ADMINISTRATION

Last Year's Expenditures.—The Veterans Administration's annual report for the fiscal year ending June 30, 1952, now on sale at the Government Printing Office, Washington, D. C., states that Veterans Administration spent $5,990 million during the year, of which $4,860 million was spent from funds appropriated by Congress and the balance, from trust and other funds. The appropriated funds came from the taxpayers. The amount spent from trust and other funds came from the premiums paid by veterans on their GI life insurance, for which Veterans Administration acts as the trustee, and from additional sources other than the taxpayers. Of this $4,860 million, $3,850 million was distributed in cash benefits to, or in behalf of, veterans or their dependents and beneficiaries under laws enacted by Congress. This represents 79.2% of the expenditures from the taxpayers' dollars. The remaining one billion dollars of expenditures from the taxpayers' money was spent as follows: (1) $664 million, or 13.7%, for medical, hospital, and domiciliary care; for the legally authorized travel of veterans; for the counseling of veterans under the education and training laws that Veterans Administration administers; and for the burial of veterans who died in VA installations; (2) $224 million, or 4.8%, for administrative costs, including those for medical, hospital, and domiciliary care; and (3) $113 million, or 2.3%, for the construction of new hospitals and other VA buildings, and for major alterations, improvements, and repairs to VA hospitals and installations.

The cash benefits, the major item in Veterans Administration's expenditures, cover a variety of items. Compensation and pension payments to living veterans and to dependents of deceased veterans was the chief expenditure in this classification with a total of $2,100 million distributed in cash. Insurance payments for military extrahazardous deaths and free indemnity payments for deaths in military service, for which the taxpayers pay under laws enacted by the Congress, cost $217 million. Education and training under the GI Bill and under Public Law 16 for the disabled veterans required a cash outlay of $1,400 million for subsistence payments to veterans and for tuition, materials, supplies, and equipment payments to the schools and training establishments. The GI loan program cost the taxpayers $78,400,000 in cash payments for the 4% gratuity to veteran-borrowers, as authorized by the GI Bill, and for claims paid by Veterans Administration loans that veterans defaulted. Special housing grants for seriously disabled veterans and automobiles for certain disabled veterans cost another $8,100,000. The final item in the cash benefits total was statutory burial awards, provided by law to reimburse the burial expenses for deceased veterans up to $150. This item cost $13 million.

The estimated veterans population as of June 30, 1952, was 19,288,000, representing a net increase of 475,000 during the year. The population total has swelled by another 400,000 since then. Veterans Administration reduced the number of its field stations from 613 to 541 during the year and the total number of its employees from 182,812 to 174,597 over the same period, despite an increase of about 6,100 employees in the medical program during the year.

Residencies in Neurology.—Residencies in medical neurology are available at the VA Hospital, Hines, Ill., beginning April 1, 1953, for a period of three years. The residency program is under the direction of the Department of Nervous and Mental Diseases, Northwestern University Medical School. The training is fully accredited by the American Board of Psychiatry and Neurology.

Personal.—Dr. Raymond F. Smith, chief, professional services, VA Hospital, Aspinwall, Pa., has been named manager of that hospital, succeeding Dr. Peter A. Volpe, who now is manager of the VA Hospital at Hines, Ill.

FOREIGN LETTERS

COLOMBIA

Yaws.—Many persons in the coastal zones of the Pacific in Colombia have been, or are, victims of yaws. A crusade against the disease is now in progress and is being carried on by the Inter-American Cooperative Health Service, which is maintained by the National Health Service and the Institute of Inter-American Affairs. The institute is a department of administration established by the Four Point Program of the United States to improve health in this hemisphere. In this campaign, the coastal territory of the Pacific was divided in five zones, which include the departments of Nariño, Cauca, el Valle and Chocó, certain regions near the San Juan River, the basin of the Atrato River, and the northern zone of the Atlantic coast. Dr. G. López Narváez, a well-known Colombian hygienist, is the head of the campaign against yaws. The success of the campaign is largely due to the previous education of the people on its aims and possible results. Before starting administration of treatment, they were taught higher standards of communal and personal hygiene. Miss J. E. Hohmann, one of the organizers of the campaign, said that the canoes cutting through the rivers toward the infected zones, with the medical and sanitary brigades, were loaded with films, motion-picture equipment, and microphones. When the infected zones were reached, the crusaders called the citizens to come to see the pictures, which showed the course and terrible damages of the disease. The crusaders gave verbal and phonographic lectures to the populace, with explanations. At present a large number of people are witnesses to the benefits of treatment. They know that their neighbors who were once victims of the disease had penicillin injections and that they are now cured. Further propaganda is unnecessary, as victims now voluntarily come requesting treatment.

The campaign against yaws was organized with two main purposes, namely, to give treatment to patients and to establish the means for prevention of the disease in noninfected persons. Although open lesions are a source of infection they heal up after a few injections of penicillin. More than 80,000 patients have already had treatment. Dr. López Narváez believes that it is possible to eliminate the disease in Colombia. It is generally believed that yaws was observed in Colombia for the first time about 1825 in Negro slaves from Africa. The disease spread slowly through almost all the Colombian coast of the Pacific. It was endemic in the territory between the borders of Colombia and Ecuador, up to those between Colombia and Panama. From statistics prepared by Dr. López Narváez, it appears that about 200,000 persons in that territory are victims of the disease. A region of about 45,000 sq. km. in the zone of the Pacific was inspected by the antiyaws crusaders. Not a single house or hut was disregarded for inspection, regardless of how remote it was in the region. Of the 80,000 persons who had the treatment, the lesions closed with the treatment alone in 74% of the cases. In the remaining 26% of cases, satisfactory results were obtained from additional treatment following the course of penicillin therapy. The Inter-American Cooperative Health Service recently held its 10th anniversary of work in Colombia.

Personal.—Dr. Leo G. Rigler of the University of Minneapolis, Minnesota, visited Colombia in answer to an invitation of the Society of Colombian Roentgenologists. He lectured in the National University, on Sept. 15-24. The course of lectures was divided in the following sessions: thorax, cardiology, osteology, pediatrics, and gastroenterology.

On Sept. 20, 1952, the Society of Colombian Roentgenologists repeated, in Bogotá, the roentgenologic seminar, which had previously taken place in the Penrose Cancer Hospital of Colorado Springs, Colo., on Sept. 6, 1952. Dr. J. A. del Regato carried on negotiations for the loan of the films and showed them in Bogotá. The films included 14 radiographs of the stomach, with clinical histories. The roentgenologists present gave their diagnoses in written form. At the end of the showing the results of the operation, reported in the histories, were read. The diagnoses previously given by the participants and the opinions on the cases were discussed, and the definitive diagnosis, as given by Dr. L. V. Ackermann, was read.

Dr. G. J. Van der Plaats, a roentgenologist of Holland, visited Colombia Nov. 15, 1952, in answer to an invitation of the Society of Colombian Roentgenologists. He lectured on various topics. The technique of radiographic amplification devised by Dr. Van der Plaats, using a tube with a 0.3 mm. focus, was admired by the Colombian roentgenologists. This technique seems to be of great value in studying the skeletal system and the lungs.

Meeting of Ophthalmologists.—The Fourth Meeting of National Ophthalmologists and Otorhinolaryngologists was held in Bucaramanga, Oct. 27-31, 1952. Twenty scientific articles on various subjects of the specialty were read, including treatment of strabismus, by Dr. A. Gaitán Nieto; keratectomy and keratotomy, by Dr. H. Arellano Angel; and Ridley's operation (replacement of opaque crystalline lens in cases of cataract by a crystalline lens of plastic material called acryl), by Dr. H. García Gómez. The next meeting will be held in Cartagena in 1953.

FINLAND

Frequency and Prevention of Deafness.—Several statistical investigations have been undertaken in Finland with regard to the frequency of deafness in school children and in persons in various occupations, but no attempt has hitherto been made to ascertain the deafness rate in the country as a whole. To make good this omission, a scheme has been devised at the Ear Hospital of the Aabo University for taking a census, with sample testing on lines already followed in the United States. Dr. Urpo Siirala of this hospital has undertaken an analysis of the 6,903 patients attending hospital in the five year period 1947-1951 and has found that about 60% of them suffered from some disease or other of the middle ear. It is this group of diseases in particular that does much to determine the incidence of deafness in a community, and Dr. Siirala has reviewed in this connection the experience gained at his hospital with regard to the prophylaxis and treatment of middle ear disease. At a meeting of the Finnish Medical Society he pointed out that several of his compatriots have of late shown a tendency to prefer conservative to operative treatment in acute cases of inflammation of the middle ear. Such conservative treatment depends on dripping into the ear preparations, the action of which depends largely on osmosis. In some cases, particularly light cases, these preparations banish earache, but Dr. Siirala doubts that they really cure inflammation and restore the normal functions of the ear. But he added that every specialist in diseases of the ears knows what it is to be confronted by complications whose development has been favored by such preparations, which have masked the symptoms and thus led to mastoiditis. It is more important to assure effective drainage of inflammatory products; without such drainage even the most vigorous chemotherapy is apt to be ineffective. Dr. Siirala concluded that if only acute inflammation of the middle ear were treated early and effectively, it should be possible to prevent more than 50% of the diseases of the ear, which at present lead to loss of hearing.

Reference may be made in the same connection to a study by Dr. E. A. Lahikainen, who at the Ear Hospital of the Aabo University has carried out bacteriological examinations of 734 cases of middle ear inflammation. He found pneumococci in 38%, hemolytic streptococci in 24%, Hemophilus influenzae in 15%, Streptococcus viridans in 3%, and staphylococci in 2%. The remaining 18% proved sterile. More than 70% of the hemolytic streptococci were resistant to sulfathiazole, whereas this was the case with only 5% of the pneumococci.

The items in these letters are contributed by regular correspondents in the various foreign countries.

Treatment of Rheumatism and Tuberculosis.—Recent studies of the treatment of the rheumatic diseases with cortisone and of tuberculosis with isonicotinic acid show how closely advances in medicine abroad are followed in Finland. At the hospital for rheumatism (in charge of Dr. V. Laine) in Heinola, Dr. Martti Oka has combined cortisone with para-aminobenzoic acid in 20 cases of rheumatoid arthritis. This combination had been suggested to him by the work of Wiesel and others who have found that para-aminobenzoic acid in combination with cortisone enables the dosage of the latter to be effectively reduced. The age of Dr. Oka's patients ranged from 21 to 50 years, and the duration of their illness, from ½ to 18 years. The dosage of cortisone was 25 mg. daily, and, while in some cases it was given by the mouth, in others it was given by intramuscular injection. From 6 to 12 gm. of para-aminobenzoic acid were given daily in doses of 1 to 1½ gm. at intervals of two to three hours. In one group of seven cases the cortisone alone was discontinued after a few weeks, and in another group of seven cases, para-aminobenzoic acid alone was discontinued after a similar interval. In as many as 16 cases good results could be claimed, and uncertain results were noted only in 4 cases. There was an average gain of weight of 2.3 kg., and with only one exception there was a fall of the sedimentation rate, which had been 69 mm. on the average before the combined treatment was started and was 42 mm. after its conclusion. Diminution of local tenderness was marked in 15 cases and stiffness in the joints in several. The benefits achieved were, on the whole, less marked in the four male patients than in the others, but the outcome seemed to be unaffected by the age of the patients or by the duration of their disease. While Dr. Oka cannot claim as great a therapeutic success as the originators of this combined treatment have achieved, he is impressed by its value in helping to reduce the dosage of cortisone alone and thereby not only effecting a certain economy, but also avoiding those side-effects to which a relatively more heroic dosage of cortisone may give rise. Indeed, the number and degree of side-effects in his material could well be described as insignificant. The recurrence of symptoms after the termination of this combined treatment also ran a comparatively mild course.

At the Nummela Sanatorium (in the charge of Dr. Nils Riska) isonicotinic acid was given a trial under due control, including blood tests and counts. A note of warning was sounded by Dr. Riska who observed a fall of the hemoglobin from 105 to 65 per 100 cc. and a fall of the erythrocyte count from 5,400,000 to 3,100,000 in a man, aged 32, given isoniazid (isonicotinic acid hydrazide) in a dose of about 5 mg. per kilogram of body weight. A total dose of 12.8 gm. was given in the course of 32 days. The patient also suffered from nausea, vomiting, anorexia, and giddiness while the drug was given, and it was found necessary to replace it by *p*-aminosalicylic acid and dihydrostreptomycin. This case helps to emphasize the warning sounded in other quarters with regard to the liability of the drug in question to influence the concentration of hemoglobin in the blood.

Legal Induction of Abortion.—The new law concerning the legal induction of abortion came into force in Finland on July 1, 1950. In some respects this law differs in essential from the corresponding laws in Sweden and Denmark, but in all three countries it was hoped that legally induced abortions would reduce the frequency of criminal abortions. The Finnish law does not recognize purely social indications for the induction of abortion, which is decided on by two specialists, one of whom actually induces it. It is, of course, too early to draw far-reaching conclusions concerning the effects of this law, but a preliminary review of its workings, analyzed by Dr. K. Niemineva and Dr. O. Ylinen of Helsingfors, is informative. Their report, which is published in the Finnish medical journal *Duodecim*, now incorporated in the conglomerate Scandinavian medical journal *Nordisk medicin*, deals with the experiences of the Helsingfors Maternity Hospital, where between July 1, 1950, and Dec. 31, 1951, a total of 579 legal abortions were induced, 141 of them being combined with sterilization. Various operations were employed including Pomeroy's method, which has been found to be simple and quick. The complication rate was 12%, but there was only one fatal case—that of a woman, aged 23, suffering from severe heart disease for which the induction of abortion was indicated.

In classifying the indications for the induction of abortion it was found that they were sometimes multiple, and it was not easy to tabulate several different indications separately and clearly. In 82% of the total cases the abortions were induced because of tuberculosis, mental disease, exhaustion, and heart disease. Tuberculosis was the indication for abortion in 140 cases. Exhaustion (lassitude, weakness, and asthenia universalis) accounted for 102 cases. Unmarried, divorced, and widowed women comprised 15.5% of all the cases. While it is still too early to calculate the effects of the new law on the frequency of criminal abortions, it is both ominous and discouraging that in neighboring Sweden their frequency has risen instead of fallen. In Denmark, also, experiences have been disillusioning in this respect. It remains to be seen how the criminal abortion rate will behave in Finland, and it is not safe in this matter to apply the experiences of one Scandinavian country to those of another, particularly as the respective abortion laws are by no means identical in Denmark, Finland, and Sweden.

ISRAEL

Poliomyelitis.—Before 1949 no epidemic of poliomyelitis had been recorded in the country and the annual incidence was 20 to 30 scattered cases. In the summer of 1949 the number of cases started to increase, and by May, 1950, the peak of the epidemic was reached, with 338 cases. The expected seasonal decline occurred in the winter of 1950-1951, but the incidence rose again the following spring, with a peak of 134 cases in July, 1951. The seasonal decline was less pronounced the following winter, the monthly average being 90 cases; but a further rise occurred in the spring, and the peak month so far has been July, with 105 cases. The annual number of reported cases during the epidemic was 128 in 1949, 1,602 in 1950, and 917 in 1951. Based on a population of 1,250,000 by the middle of 1950, this gives an extremely high over-all attack rate of 160 per 100,000.

During this epidemic the disease appeared as a true infantile paralysis, about 80% of the victims being below the age of 5 years. The incidence below the age of 1 year was particularly high, being about 30% of all cases. The epidemic started in the large towns and spread gradually into rural districts. Attack rates varied greatly and were very high in some settlements, where compact local outbreaks occurred. For example, in four communal settlements with a total population of 1,207, the case incidence was 7%. The years 1949-1951 were years of mass immigration, during which time the population increased by more than 50%, different groups of immigrants coming from entirely different epidemiological backgrounds. Such a sudden increase of population creates an epidemiological situation unique in the world. The data gathered on this matter are still being statistically analyzed, but it would seem that so far there is very little evidence that the incidence and age distribution varied greatly between the settled and the new immigrant population or between the various community groups of the latter.

It is obvious that the vast majority of nonparalytic cases are not discovered; however, the age distribution of cases diagnosed by clinical signs other than paralysis, or on lumbar puncture, is as follows: below 4 years, 20-30%; 4 to 10, 50%; and over 10, 20%. Bulbar poliomyelitis has been seen in about 20% of all paralytic cases, with higher rates in infants under 1 year and in the comparatively few cases that occurred among young adults.

No decisive factor responsible for the transition from the endemic to the epidemic situation has so far been established. The low age incidence, indicating immunity in all but small children, makes it seem improbable that an entirely new strain of virus is responsible. A similar state of immunity seems to prevail in the countries of origin of most of the immigrants. Three virus strains so far isolated from cases of this epidemic were found not to be related to the Lansing strain. Further virus studies are under way at Yale University, and the Hebrew University in Jerusalem has completed a preliminary survey of Lansing antibodies in various age groups of the population. Work is now in progress on Coxsackie virus in the country.

The generally advocated preventive measures were adopted early in the epidemic. Stress was laid on early diagnosis, diagnosis of nonparalytic and abortive cases, and hospitalization of practically all reported cases. Hospitalization is entirely free of charge in the government hospitals at Haifa and Bnei Brak (Pardess Katz) or at government expense in the isolation ward of the Shaarei Zedek Hospital in Jerusalem. Special quarantine measures were adopted only in children's nurseries, communal settlements, and immigrant camps. Tonsillectomies and other selective operations were suspended. On account of the reports appearing as to the possible connection between preventive inoculations and incidence of paralytic poliomyelitis, it was decided to suspend inoculations against diphtheria and pertussis and against typhoid in children under six. The BCG inoculation campaign was continued. All inoculation campaigns have been restarted since spring, 1952.

ITALY

National Convention of Internal Medicine.—At the 53rd national convention of the Italian Society of Internal Medicine in Venice, Oct. 3-5, a paper on idiosyncrasies of and intolerance to foods and drugs was presented. Professor Dominici, from the University of Perugia, who discussed the part concerning food, said that the term alimentary idiosyncrasy covers all the clinical manifestations that appear after, and as an effect of, the introduction of food and are determined by an allergic mechanism. In general, any food can function as an allergen, namely, it can sensitize the tissues and the entire organism. Except for a few cases in which the food sensitizes the skin by direct contact or the respiratory system by inhalation, the food enters the organism through the vast surface of the digestive mucous membrane that extends from the lips to the extreme cauda of the intestinal tube. First among the allergenic substances are the nondigested or the partially digested proteins that can behave like total antigens. Then there are many other substances that are not primarily antigens and that can function as such when they conjugate with a protein; these are partial or incomplete antigens, or Landsteiner's haptens. This fact assumes a great importance for alimentary allergy because even the intermediate and the simpler products of the proteins' transformation may act as partial antigens. The allergic reactions can be produced in the tissues only or in one organ, such as the liver, respiratory apparatus, and skin, or else in all the organs simultaneously, creating the most dissimilar clinical syndromes.

Professor Di Mattei, from the University of Rome, read a paper on drug idiosyncrasies and intolerances to them. He placed the latter in three groups: those with allergic characteristics; those due to deviations of the normal metabolism of the drugs; and those due to dysfunction of the reactivity of the tissues that are altered in their metabolism, with impairment of particular enzymatic systems. Many drugs can follow concurrently the three mechanisms. Professor Serafini, from the University of Rome, discussed the clinical aspects of drug idiosyncrasies and intolerances and said that the latest of the numerous drugs adopted to cure syndromes due to reaction to drugs and those that yield best results are the synthetic antihistamines: corticotropin (ACTH) and cortisone.

The third paper was on arterial hypotension as a syndrome and was read by Professor Pellegrini, from the University of Pavia. This syndrome is like an arterial-arteriolar hypotension, more or less pronounced, of the aortic circulation. The intracavitary heart pressures of the right side and of the lesser circulation are often normal, but they may also be slightly elevated, probably in relation to a spastic condition of the pulmonary arterioles. Intraventricular pressure of the left side is considerably decreased with a manifest proportion to the decreased value of the intra-aortic pressure. The syndrome of arterial hypotension may lead to conditions of mild hypotonic peripheral insufficiency and, more rarely, to conditions of collapse. It does not seem to be related to modifications of the arterial elasticity; it does have repercussions on the functional behavior of the heart. In fact, the work of the left heart is clearly decreased, whereas that of the right heart is normal or slightly increased. Often the arterial hypotensive syndrome is accompanied by normal electrocardiograms. From the pathogenetic point of view it seems to be linked to a mild degree of insufficiency of the adrenal gland, and this is shown clinically by the decreased amounts of adrenal hormones in the urine. About 6% of the persons who are apparently healthy, especially during middle age, have a syndrome of arterial hypotension.

NORWAY

Shortage of Asylum Beds.—At the annual meeting last October of the Norwegian Psychiatric Association protests over the shortage of beds for insane and mentally defective patients culminated in a resolution addressed to the Norwegian government and parliament. Behind this resolution is a history of prolonged frustration, to which reference has already been made in THE JOURNAL (July 12, 1952). In an appeal in the lay press to the public, Dr. Ottar Lingjaerde, who is in charge of the public Lier Asylum, points out that some 10% of its inmates are mentally defective and unsuitable for asylum care; another 10% suffer merely from the disqualifications of old age and should, by rights, be cared for in homes for the aged. Because of these two groups, many patients who are eminently curable owing to the improvement in the treatment of insanity during the last 15 years are excluded from treatment in asylums.

Figures published in connection with the meeting of the Norwegian Psychiatric Association drive home the argument in favor of providing more institutional treatment for the insane. During 1951 as many as 550 insane persons had to be lodged in prisons for want of asylum accommodation. In the same year the public asylums in Norway had an average of 25% above their normal quota of patients. Yet of the some 17,000 insane patients requiring institutional treatment, not even one-half have been given it. The remainder have been lodged in private homes, although at least 2,500 are not suitable for such treatment. While in England there are some 4.6 beds for insane and mentally defective patients per 1,000 inhabitants, the corresponding figure for Norway is only 2.2. In Oslo the already understaffed police force has not only to take charge of insane persons in the main prison but has also to stand guard over violent patients in private homes. In one week alone, as many as 24 police constables were put on such duties. As for the housing of the insane in private homes in rural areas, the prosperity enjoyed by Norwegian farmers at present means that many of them no longer need to supplement their incomes by this system, which, in spite of its being undesirable in many instances, has at least been something of a safety valve and better than prison accommodation.

Tuberculin Matriculation or Mass Radiography?—Tuberculin matriculation, a term coined by Dr. T. Gedde-Dahl, secretary general of the Norwegian National Association Against Tuberculosis, consists of testing everyone in a given district with tuberculin every year till he or she has become tuberculin-positive. This system, described in detail by Dr. Gedde-Dahl in a recent number of the *American Journal of Hygiene*, has a competitor in mass radiography. A study of the comparative merits of the two is therefore opportune, and Dr. Åge Johansen and Dr. Peter Hjort have been fortunate in working in an administrative district in Norway in which both methods have been tried. The district in question was Gloppen on the west coast of Norway, where tuberculin matriculation (T) has been in operation since the autumn of 1943, and where mass radiography (M) was started in the autumn of 1950. In *Nordisk medicin* for Oct. 31, 1952, they have tabulated their findings after asking themselves the following questions: 1. Is M necessary in a district in which T is employed? 2. Which of the two is the more effective? 3. Is it enough only to employ the method found to be more effective, or should they be employed side by side?

The comparison proved to be unfavorable to M in so far as 19.6% of the persons eligible for it failed to turn up for it, while only 3.9% of the persons due for T absented themselves. The absenteeism in the two methods combined was only 1.9%, an argument in favor of employing both methods as the one supplements the other. Another shortcoming of M was the frequency with which skiagraphs were misinterpreted. It was also an argument in favor of T that it assured the discovery of con-

verters before radiologically demonstrable lesions had developed. On the other hand, there were several cases missed by the Pirquet test, which was negative in the face of evidence contrary to it. In the light of these and other observations Dr. Johansen and Dr. Hjort admit that their material does not clearly show which of the two methods is the more effective. They are in favor of employing both, largely because they supplement each other and thus reduce the percentage of absentees quite effectively. The limitation of mass radiography to persons over the age of 14 meant that in childhood other methods for the early detection of tuberculosis must be employed. The discovery of three new cases of active disease by mass radiography in a district subject to tuberculin matriculation for several years showed that it is not absolutely foolproof.

Heredity and Environment.—In the autumn of 1951 Prof. Ørnulf Ødegaard, in charge of the Gaustad State Asylum, gave a series of lectures to students of all the faculties including the Faculty of Medicine. These lectures have been combined and published by Aschehoug under the title "Arv og Miljö i Psykiatrien" ("Heredity and Environment in Psychiatry"). Professor Ødegaard warns his readers that he may not succeed in adding to the clarity of their conceptions and theories in this field. Indeed, he hopes to make his readers reconsider any hard and fast, preconceived conceptions they may have on the subject. Throughout this book he preserves a delicate balance between the conflicting opinions at the present time, and he draws on the experiences and theories of both communism and Hitlerism to show how diametrically opposed the protagonists in this debate are to each other.

But with regard to one subject, to which Professor Ødegaard has contributed much original research, he shows how predominant the influence of heredity is. As he points out, the frequency of insanity is three to four times greater among unmarried than among married persons. This difference can hardly be accidental, and it cannot be explained away on the assumption that insanity is more easily detected in unmarried than in married persons. There remain two other possible explanations: Either the married are more protected against factors favoring insanity than the unmarried, or the latter are predisposed by heredity to insanity. Professor Ødegaard is inclined to favor the heredity school in this respect, and he notes that while schizophrenia is much more frequent in unmarried than in married persons, manic-depressive psychosis is about equally frequent in the married and unmarried. Now schizophrenic patients often have records of mental abnormalities likely to spoil their chances of marriage, and so by a process of social selection they come to swell the ranks of the unmarried. On the other hand, the subjects of manic-depressive insanity often have records of adaptability to circumstances, sociability, and other characteristics likely to be assets in marriage. Again, the relatively high frequency of insanity in the unmarried is more marked in men than in women, and Professor Ødegaard suggests that this is so because social selection is a more effective factor for men than for women in courtship.

Halden's New Hospital.—The town of Halden on the Oslo Fjord possessed an old hospital to which the town's mayor was admitted for treatment in 1934. The need for a new hospital impressed him so greatly that he started planning for something better, but it was not till the Germans had been turned out of Norway in 1945 that the new hospital began to take concrete shape. It was formally opened on Nov. 11, 1952, the first hospital of its kind to be completed since World War II. It is destined to serve a population of about 25,000 and is, in many respects, the last word in hospital construction. In addition to a maternity department with 22 beds, it has 60 beds for surgical cases and 60 for medical cases. There are three medical chiefs in charge of the surgical, medical, and radiological departments, respectively. A large refectory is designed to provide meals for all employees. A nurses' home is being built with a view to accommodating 50 to 60 nurses. The most modern of all the hospitals in Norway, Halden's hospital is meeting a serious need, for today the number of hospital beds per population unit is smaller now than it was in 1939. The cost of building is about 7 million kroner, or 1 million dollars.

SPAIN

Retirement of Dr. Gallart Monés.—Dr. Gallart Monés, who recently retired at the age of 70, worked a long time in the Hospital de la Santa Cruz y San Pablo of Barcelona and was the founder of the School of Pathology of the Digestive Tract in that hospital. The files of the school contain more than 50,000 clinical records of cases observed there. These records are the main source of teaching of pathology of the digestive tract in Spain. Dr. Gallart Monés is an honorary member of the societies of gastroenterology in almost all European and Latin American countries.

On his retirement, the Society of Spanish Gastroenterologists honored him by publishing an extraordinary issue of the *Revista Española de las Enfermedades del Aparato Digestivo y de la Nutrición*. Among the most important articles in this issue are those of Drs. García Morán of Oviedo, Gutiérrez Arrese, T. Hernando, C. Marina Fiol, and Oliver Pascual. Dr. García Morán dealt with a type of hydatid cyst with clinical symptoms of cholecystitis; Dr. Gutiérrez Arrese, with diet in tuberculosis; and Dr. Hernando, a professor in Madrid University, precancerous diseases. His opinion differs from that of physicians who state that gastric ulcer changes into cancer. Gastric ulcer does not cause local immunity to cancer, but the transformation of the former into the latter is very rare. On the other hand, the gastric area in which carcinoma develops is very different from that in which gastric ulcers do. In relation to treatment, an operation is indicated in cases of gastric ulcer that do not respond to therapy, as the gastric disorder may prove to be an ulcerative form of cancer. Atrophic gastritis can be considered a forerunner of gastric cancer because of the facts that cancer may appear in patients who for a long time suffer with anachlorhydria and that gastric tumors frequently develop in patients with anachlorhydria in pernicious anemia conditions.

Dr. Marina Fiol described a special type of gastritis that can be considered as a precancerous disease. This disease appears in persons after the age of 40. In some cases, it appears in patients who previously suffered from an ulcer in the lesser curvature. The symptoms, as a rule, are of short duration, for about six months. Patients complain of lack of appetite, loss of weight, asthenia, a sensation of general illness, and gastric discomfort after meals. The sedimentation rate is moderately increased. The results of the test for occult blood are negative. The roentgen image shows a syndrome of partial gastric rigidity, narrowing of the gastric lumen, disappearance of the gastric folds, which in some areas are represented by irregular deep wrinkles, a granular mucosa, and, sometimes, lack of filling with the opaque material in certain zones. The image is very similar to that of cancer. In certain cases it is difficult to make a differential diagnosis with already constituted carcinoma. The syndrome has been described by American authors as pyloric antritis, pseudotumoral gastritis, and antral gastritis. Dr. Marina Fiol objects to these names because the disease is observed not only in the antrum, its most frequent location, but also in other zones. He believes that the name should be either gastrosis or gastritis.

Dr. Oliver Pascual describes a new clinical form of jejunitis caused by virus. In more than 50 cases of virus diseases, the occurrence of a systematic hepatogastric reaction, causing chronic, subacute, or acute jejunitis or jejunoileitis, was observed. Its presence was confirmed by the results of roentgen examination, biopsy, and, in some cases, laparoscopy. The virus is hepatotropic; however, in rare cases it causes a hepatosplenic reaction. This type of reaction was seen by Dr. Oliver Pascual in a case of Newcastle's disease. Diarrhea does not occur in this type of virus jejunitis, contrary to its occurrence in virus gastroenteritis in children. It is difficult to differentiate the roentgen picture from the prestenosing stage of Crohn's disease and from allergic enteropathy. The roentgen image in some cases, however, shows granuloma, a hyperplastic reaction of the lymphoid tissue, and several types of degenerative reactions of the collagen. The course of the disease, as a rule, is benign. Allergic and bacterial complications may occur. Drs. Arias Vallejo, Artigas, Badosa Gaspar, Calvo Melendro, Fernández Cruz, Gutmann of Paris, Mogena, Moutier of Paris, Nasio, Pinós and his collaborators, Vidal Colomer, Valls Colomer, and Vidal Teixidor also contributed articles to the issue honoring Dr. Gallart Monés.

CORRESPONDENCE

SPECIALIZED INTERESTS AND MEDICAL RESEARCH

To the Editor:—The proliferation of splinter groups in medical research is causing concern in some quarters, where the effects have not been altogether salutary. As an example of this divisive development may be cited the neurological field and its fringes, where there have sprung up societies oriented toward the amelioration of cerebral palsy, poliomyelitis, muscle dystrophy, myasthenia gravis, epilepsy, and multiple sclerosis. There may be others. In some instances competing groups have entered the field and an unseemly tug of war has resulted for the privilege of trying to solve one or another of these enigmas. Occasionally an incurable illness in a national figure has nearly been enough to launch an organization in itself; indeed amyotrophic lateral sclerosis appeared in danger of being separated off for a time had not one of the societies reached out unofficially and incorporated it. While in the Biblical sense it is a happy augury for the left hand not to know what the right is doing, these hydra-handed formations in the name of medical research would be well-advised to halt their feverish activity and take stock.

The avowed goal of these splinter groups is commendable; relief from chronic illness is the hope of everyone. That such will be accomplished sooner by reason of goal-directed research is by no means assured. A Domagk or a Fleming with an idea, working in a back room away from the turmoil, is what is wanted, and such persons, who have little need to be heard, are not likely to reach for support nor indeed do they seem to require much in the way of financial outlay. The expensive period as far as they are concerned is in their development, and it costs no more or less to create a Domagk or a Fleming than it does to develop a Jones or a Smith.

Basic to the development of the man with the idea is his exposure in formative years to stimulating contacts, to thoughtful and imaginative teachers. Herein lies the area where great resources are needed, and incongruously enough it happens to be the activity that schools are finding the most difficulty in supporting. The splinter societies appear to have less trouble garnering funds. In local drives for money they also remove from the community sustenance that is vital in the pursuit of certain social endeavor; they represent quite definitely competition to the entire philosophy of the Community Chest.

An incredible phenomenon has arisen in some larger communities where splinter groups have organized lay societies. Pressure is brought on medical school faculties to "do some research" on one or another condition for which money has been collected in that community. This would seem to be thought of as protecting the local preserves. Such goal-directed research, it is implied if not stated, is as important as whatever work is in progress there, if not more important. Thus we are in the incongruous position of having difficulty in finding the funds to support medical faculties, which, if they will change their goals and sights, may obtain funds by statements that they will do what manifestly they have been unable to do up to then; since if they had the idea they would have been in pursuit of it long ago.

The emotion that it is possible to engender with appeals for this or that incurable illness has been played on out of all proportion. The fact remains, however, that it is not likely that a disease will be cracked by the weight of money. Somehow the generation of ideas and the pursuit of truth does not defer to penury, as may be learned from an examination of the history of ideas and of the more important advances in medicine. The development and nurture of young, inquiring minds is surely the heart of the matter, minds that will generate the all-important idea that in the long run will lay the ghost of dread disease.

Another oppressive phenomenon stemming from the splintering of medical research is the demand made on authoritative opinion to shepherd these societies and their flocks of sufferers and their relatives. The gatherings of the latter, while helping to keep hope alive, drain the energies of the recognized authorities, since it seems to be up to them to keep the whole endeavor on an even keel. Thus the men perhaps most interested in these conditions and therefore most likely to spark their younger colleagues are long-divided so to speak, and spread so thinly as to be brought near the vanishing point. They are tugged at by national societies to join advisory boards and by local groups to meet perhaps on a periodic basis, and the demands on them increase in direct proportion to the splinters.

It is not proposed to discuss the benefits that have accrued by reason of these splinter groups; they are apparent, but it is in their very obviousness that the danger lies. There is danger in this instance to draining away resources to the periphery, where to be sure they are making a grand display. Funds may be garnered under the stress of the emotions that perhaps may not be available on any other terms, and it may be argued in this instance that expediency is the best policy. I can admit of such an argument, my concern remains about a diminishing birthright over a mess of pottage. It is quite apparent that any of the splinter groups can be justified; it is not clear that they are concerning or will concern themselves with their relationship to the whole of medicine. Perhaps the creation of national institutes and committees (e. g., Institute for Neurology and Blindness and National Committee for Neurological Research) could draw the splinters together into an integrated whole, where training might assume its proper place and, it is to be hoped, reason temper our expedient yearnings.

CHARLES D. ARING, M.D.
Cincinnati General Hospital
Cincinnati 29.

ORDERING OF DRUGS BY PHYSICIANS

To the Editor:—We feel it would be helpful to outline in some detail the effect on the physician-pharmacist-patient relationship brought about by the Durham-Humphrey amendment to the Federal Food, Drug, and Cosmetic Act that became effective April 26, 1952. From the tenor of many articles in pharmacy trade journals and from the correspondence we receive from practicing pharmacists, it is apparent that physicians generally are not fully informed about this new law and the responsibilities it places on the pharmacist.

This amendment, Public Law 215, provides a statutory definition of certain types of drugs that may be sold by the pharmacist only on the prescription of a "practitioner licensed by law to administer such drugs." It further provides that prescriptions for these drugs cannot be refilled except on the authorization of the prescribing physician. The prescription or the refill authorization may be either written or oral (for example, telephoned). If the order is oral the pharmacist is required to make a written record and file it.

It should be borne in mind that the statutory definition of prescription drugs embraces not alone those that are directly dangerous. The three categories of prescription drugs defined in the amendment are: (1) certain hypnotic or habit-forming drugs specifically named in the law and their derivatives; (2) a drug that is not safe for lay use "because of its toxicity or other potentiality for harmful effect, or the method of its use, or the collateral measures necessary to its use"; and (3) a "new drug" that has not been shown to be safe for indiscriminate lay use. Prescription drugs must be labeled by their distributors with the legend "Caution: Federal law prohibits dispensing without prescription."

We believe there has been little difficulty insofar as the original prescription is concerned. Confusion has arisen over the requirement that refills must be authorized by the prescriber. We are informed that many physicians do not indicate on the original prescription whether it may be refilled and that these physicians are sometimes quite irritated when called about authorization to refill. Pharmacists feel that they are caught in the middle and are losing the good will of the physician and the patient in trying to comply with the clear terms of the law.

A great deal of annoyance and misunderstanding can be avoided and compliance with the law facilitated if the physician at the time of writing or telephoning the original prescription would include instructions about refilling. The physician can authorize as many refills or refilling for as long a time as his professional judgment indicates before he sees his patient again. Prescription blanks that make it convenient for the physician to give such instructions are now widely available.

We would like to add a brief comment about the use of refill instructions such as "ad lib," "as requested," or "PRN." We have investigated cases in which prescriptions for hypnotics such as the barbiturates, or central nervous system stimulants such as the amphetamines, were being refilled many years after they were written, on an almost daily basis. Obviously, the drugs in these cases were not being supplied in accordance with the will and purpose of the physician who wrote the original prescription. Nevertheless, if the refill instruction on the original prescription was of the indefinite and continuing type referred to above, correction of abuses is complicated and difficult. We might also emphasize that the pharmacist has the responsibility under the law to accept an order for a prescription drug only if it comes from a "practitioner licensed by law." We recognize that as a practical matter the physician's office nurse or secretary will in many cases telephone the prescriptions, but it is the pharmacist's responsibility to make certain that the order is bona fide. Of course, nothing in the Food, Drug, and Cosmetic Act in any way modifies the law and regulations relating to prescriptions for narcotics.

Irvin Kerlan, M.D.
Acting Medical Director
Food and Drug Administration
Washington 25, D. C.

BRONCHIECTASIS AND ASTHMA

To the Editor:—In response to the letters of Drs. Friedman and Walbott in The Journal, Dec. 13, 1952, page 1512, concerning our paper "Hidden or Unsuspected Bronchiectasis in the Asthmatic Patient" (Overholt, R. H.; Walker, J. H., and Woods, F. M.: *J. A. M. A.* **150**:438 [Oct. 4] 1952), may I state our belief that all of us are working toward the same goal and that the apparent differences are only in nomenclature. In the quest for purity of expression, I also regret that the term "asthma," like its alphabetical neighbors arthritis and atelectasis, has, in general usage, become a convenient diagnostic receptacle. A high percentage of patients bearing the diagnosis of asthma respond favorably to medical therapy. Those who do not may thereby technically negate that diagnosis, but they are still left with the same symptoms of paroxysmal dyspnea and wheeze. Perhaps none of the patients reported on by us had "asthma," but all of them had had that diagnosis and had been treated for that condition. Such patients, living their exhausted lives in the constant fear of suffocation, constitute one of the most pathetic groups seen by the medical profession, and we are all obliged to explore every possible avenue that may bring them relief.

R. H. Overholt, M.D.
1101 Beacon St.
Brookline, Mass.

NEOMYCIN

To the Editor:—In The Journal, Dec. 13, 1952, page 1459, there appeared an article by myself and Dr. W. C. Baum entitled "Antibiotic and Chemotherapeutic Agents in Infections of the Genitourinary Tract." In that paper it was stated that neomycin administered orally, 250 mg. every six hours, might be associated with nephrotoxicity and ototoxicity. This was an error in preparation of the original manuscript. It should have been stated that the intramuscular administration of neomycin in such amounts is occasionally associated with nephrotoxicity and ototoxicity and that this should be anticipated. Our experience with the oral use of neomycin has not included any evidence of nephrotoxicity or ototoxicity.

Reed M. Nesbit, M.D.
University of Michigan
Ann Arbor, Mich.

CHRONIC COR PULMONALE VERSUS BERNHEIM'S SYNDROME IN AORTIC STENOSIS

To the Editor:—In an article in The Journal, Nov. 15, 1952, page 1111, entitled "Aortic Stenosis Manifested as Chronic Cor Pulmonale," Soloff and associates report a case in which aortic stenosis was an unexpected postmortem finding in a patient without an aortic murmur but with classical symptoms of advanced chronic cor pulmonale. In order to determine whether this symptom complex frequently accompanies or dominates the clinical picture of aortic stenosis, these authors measured the circulation time and venous pressure in 14 consecutive patients with isolated stenosis of the aortic valve. They observed that the circulation time for the right side of the heart was commonly prolonged and frequently was longer than the circulation time for the left side. From these observations, they concluded that an isolated prolonged ether time (arm to lung) does not exclude primary disease of the left side of the heart even in the presence of overwhelming pulmonary symptoms. In other words, these authors believe their data to indicate that aortic stenosis frequently results in secondary pulmonary changes and chronic cor pulmonale that may obscure the primary disease of the left side of the heart.

One cannot deny that Soloff and his associates have reported a case in which aortic stenosis coexisted with chronic pulmonary disease, but their assumption that the former gave rise to the latter and that each was not an independent process should not go unchallenged. Indeed, their observations that in most instances the circulation is delayed relatively more on the right side of the heart (arm to lung) than on the left side (arm to tongue minus arm to lung) in patients with isolated aortic stenosis, even in the absence of congestive heart failure, lend far greater support to an entirely different mechanism than that of secondary chronic cor pulmonale. Precisely the same findings with regard to circulation times are observed in the syndrome of Bernheim (*Rev. de Med.* **30**:785, 1910), a clinicopathological entity in which the right ventricle becomes partially obliterated by a bulging and hypertrophied interventricular septum so as to produce the clinical picture of isolated right heart failure.

This clinical paradox, in which dyspnea and pulmonary congestion are minimal or occur only terminally, is found in patients with left ventricular enlargement from any cause and when seen in its classical form is frequently associated with aortic stenosis. Bernheim's attention was first drawn to this complex by his finding at necropsy that many patients who had died with the classical manifestations of right-sided heart failure had stenosis of the right ventricle and not dilatation as would be expected. Fishberg (Heart Failure, Philadelphia, Lea & Febiger, 1940) has also observed many necropsies in which well-marked narrowing of the right ventricle had resulted from a bulging interventricular septum. Our own observations in 15 clinical cases of the syndrome of Bernheim, several of which have been reported (*Am. Heart J.* **30**:427, 1945; *Circulation* **1**:759 April [pt. 2] 1950) have confirmed a "dissociated" failure of the circulation (i. e., systemic venous engorgement without disturbance in pulmonary blood flow) and have shown a disproportionate increase in arm to lung time, a finding that Soloff and associates have, without warrant, interpreted as evidence of chronic cor pulmonale. In many instances, moreover, we have observed that the anatomic findings of the syndrome and the characteristic changes in circulation time are present without the classical picture of isolated right heart failure. This is commonly the case early in the development of the syndrome or late when left ventricular failure and pulmonary congestion finally supervene as a terminal event. The studies on circulation time in aortic stenosis reported by Soloff and associates obviously testify to the frequency of the Bernheim syndrome in that disorder rather than to the occurrence of chronic cor pulmonale.

Henry I. Russek, M.D.
Consultant in Cardiovascular Disease
U.S.P.H.S. Hospital
Staten Island, N. Y.

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

REVISION OF THE ESSENTIALS OF AN APPROVED INTERNSHIP

PREFACE

The internship, since the turn of the century an integral feature in the education of a physician, has been the subject of much critical discussion and study particularly in the last few years. It is the opinion of most medical educators and others interested in the problem that a redefinition of the internship and a reclarification of its role in medical education is essential at this time. The improvement of clinical clerkships on the one hand and the marked expansion of residency training programs on the other have altered the intern's position as a member of the hospital staff.

When the internship became a generally recognized part of the education of a physician some 40 years ago, it was designed to provide the graduate's initial contact with patients, including responsibility for their care. It no longer constitutes such initial contact nor is it any longer the final step in the formal education of most physicians. Rather it is now only one of several graded steps toward the assumption of total responsibility for patient care. As such, it remains an essential part of the education of a physician but should be redesigned to fulfill its present purpose. With this concept in mind, it is evident that the internship can be conducted only in those hospitals in which the educational benefits to the intern are considered of paramount importance with the service benefits to the hospital of secondary significance.

One aspect of intern education which warrants consideration is the growing discrepancy between the number of internships offered in hospitals approved for intern training and the number of applicants available to fill them. While this disparity, per se, is of no great import, its effect on the stability of internship programs throughout the country is of serious consequence. It is obvious that a sound educational program cannot be maintained if the number of interns the hospital is able to appoint varies from none at all one year to a full complement the next. Further, it is unlikely that a hospital can conduct a satisfactory program with less than two-thirds of its normal complement of interns. To attract a full intern staff, many hospitals have begun to offer excessive stipends, bonuses, or other rewards of a noneducational nature. Such practices all too often result in an undue emphasis being placed on the interns' services to the hospital while the educational aspects of the program are neglected.

In 1951 the Council on Medical Education and Hospitals appointed an Advisory Committee on Internships to consider the internship in its broadest aspects. This committee was composed of medical educators and physicians representing hospital administration and the major clinical divisions. One of the functions of this committee was to review the standards required of hospitals approved for intern training. The present revision of the Essentials of An Approved Internship incorporates the recommendations of the Advisory Committee on Internships based on the results of its study. It is offered as a guide to the staffs of hospitals conducting intern programs and is the basis on which their teaching potential will be evaluated. It may also serve as a source of information for students planning their internship education as well as to interns themselves.

I. INTRODUCTION

The internship is a highly important phase in the education of a physician. During this period, the young graduate is given the opportunity to put into practice the principles of preventive medicine, diagnosis, therapy, and patient management which he learned as a medical student. He is able to observe, usually for the first time, patients on a "round the clock" basis and, if his internship is properly organized, can follow his patients from admission to discharge and subsequently in the outpatient department. Under the supervision of the attending staff, he is given progressively increasing responsibility to the end that he acquires confidence in his own clinical judgment.

A well-organized, effective, educational program inevitably results in the improvement of the quality of patient care in a hospital. In no way does it conflict with the hospital's primary function of providing adequate facilities for the scientific care of the sick and injured by a competent medical staff. For such an educational program, it is fundamental that the staff recognize its obligation to permit full utilization for teaching purposes of all patients, whether private or nonprivate, to whom interns are assigned. If this concept cannot be accepted without reservation, the hospital staff ought not to attempt to conduct an internship program.

In a hospital whose staff is responsible for intern education, services must be organized in such a manner that bedside teaching, rounds, and clinical conferences can be effectively conducted. In some hospitals, particularly those in which private patients predominate, it is not practicable to organize the services on an educational basis. The staffs of such hospitals should not attempt to develop intern training programs. Even if they are able to meet other requirements for approval, it is improbable that they will be able to carry out a successful program.

The medical staffs of hospitals conducting intern education assume a serious responsibility to their interns, to the medical profession as a whole, and to the communities in which these physicians will later become established. It is well recognized that techniques and practices acquired by the intern at this stage of his training, as well as the ethics and the philosophic approach to the practice of medicine which he develops during this period, are likely to persist throughout his career. A successful internship program can be carried out only in those hospitals in which the medical staff and hospital administration understand the principles of, and are prepared to accept full responsibility for proper training.

Approval for intern education is granted by the Council on Medical Education and Hospitals through authority delegated to it by the House of Delegates of the American Medical Association. The approval program of the Council is entirely extralegal and voluntary. Hospitals seeking approval by the Council are expected to meet and maintain the standards outlined in these Essentials.

II. THE INTERNSHIP

The internship is that phase of medical education and training which ordinarily follows immediately upon the completion of the four year undergraduate medical curriculum. It consists of the supervised practice of medicine among the patients in a hospital and in its outpatient department, with continued instruction in the science and art of medicine by the hospital staff.

Most authorities today are agreed that after graduation from medical school every physician should have at least two years of graduate education and training in a hospital before he undertakes the practice of medicine. Not a few physicians intending to do general practice spend three or more years in such work, while physicians desiring to be certified by an American board are required to take three to five years of graduate work after completing the medical school course.

Graduate education in hospitals is offered in two categories—internships and residencies. The internship as described above is the initial phase of this training. Following completion of an internship, a physician may take a residency which provides more advanced education in one of the specialties or in general practice. Formerly, many internships were of 18 to 24 months' duration and provided in the last 6 to 12 months, education and training comparable to that found in a first year residency today.

The American boards in the specialties, however, give credit for only 12 months of internship education and require that the balance of a candidate's graduate education be in the form of a residency. Although a number of American boards will give credit for the second 12 months of a 24 month internship when this period is spent in the specialty concerned, most hospitals now limit their internships to one year and designate training beyond this point as residency training. Further factors currently tending to limit internships to one year are the regulations of the Selective Service System and those of the armed forces, which permit deferment of young physicians liable for military service for but one year of internship education. Still another factor is the understandable reluctance of young graduates taking the longer internships to accept appointments in which they are

classified as interns when their colleagues who graduated at the same time and began their specialty training after a one year internship are classified as residents. For these and other reasons it is rapidly becoming the custom to designate hospital training beyond the first 12 months of internship as residency training.

An approved internship may not be less than 12 months in duration. Longer internships up to 24 months may still be provided to advantage in some instances, although practical considerations will probably make it desirable to designate the second year as a residency in a specialty or general practice even though the entire 24 month period may be conceived and organized as an integrated educational program.

It should be clear that in recognizing the trend to limit the internship to a 12 month period, the Council does not consider that this period is sufficiently long to prepare the young physician for practice. Physicians who take only a 12 month internship should supplement this educational experience with at least one additional year spent in a residency preparing for a specialty or general practice.

Approved internships may be "rotating," "mixed," or "straight." It is the opinion of the Council that the best general, basic education is provided by a well organized and conducted rotating internship.[1] A rotating internship is one which provides supervised practice in the four major divisions of internal medicine, surgery, pediatrics, and obstetrics. Interns ordinarily should not be assigned to more than one major division at a time. Training in laboratory diagnosis and radiologic interpretation should be included. This may often best be achieved through integration with the interns' activities on other services.

In rotating internships of 12 months' duration the time allotted to internal medicine should equal or exceed the time given to any other service. Assignments should be made in such a manner as to assure that each intern devotes at least three consecutive months respectively to internal medicine and to surgery. No assignment may be of less than two months' duration. In view of these two restrictions, there can be not more than three additional services, two of which should be obstetrics and pediatrics. If an intern desires experience in a specialty not included in his rotation schedule, he may obtain such training through appropriate outpatient assignments or by participation in consultations on his own and other patients conducted by members of the department concerned. Too frequent a rotation of assignments and hence too short a time on service are inconsistent with the conduct of a good rotating internship.

A mixed internship is one in which at least half of the total time is spent on one of the four major services with additional experience on one or more, but not all the other major clinical divisions; e. g., medicine, pediatrics, and obstetrics.

A straight internship is one which provides experience on a single service, although one or more related subspecialties may be included. Straight internships are approved in internal medicine, surgery, and pediatrics. To offer satisfactory straight internships a hospital must be approved for residency training in the specialties involved.

The approved internship, whether it be rotating, mixed, or straight, should provide opportunity for experience with psychiatric problems. With the increasing growth of psychiatric inpatient units in general hospitals, it may be possible for interns to be assigned to such units during their internship, enabling them to participate directly and actively in the diagnosis, study and treatment of various types of psychiatric problems. In most instances, hospitals will not have such psychiatric units, in which case serious efforts should be made to provide skilled psychiatric consultative staffs who can then participate actively with interns in the study, diagnosis, and treatment of patients with psychiatric problems on the service to which the intern is assigned. This consultative educational service should not be restricted to the diagnosis and management of psychotic patients but should also include those applications of psychiatric knowledge and skill which relate to acute and chronic illness, convalescence, surgical intervention, reactions of relatives of sick patients, and other such problems. The primary goal of such instruction should be a familiarization with methods which may lead to better understanding on the part of the intern of the emotional status of all his patients.

The preventive aspects of disease, whether organic or functional in nature, should be stressed continuously in developing the intern's skill in the management of patients. Where physical rehabilitation and counseling with regard to suitable future occupation for the patient are indicated, the intern should participate in these activities.

Some internships are organized especially to prepare the intern for general practice. Such an internship does not differ from other internships in basic principle but may differ with respect to emphasis and allocation of time in one or more medical fields. This type of internship is frequently designed to provide two years of training.

III. HOSPITALS ELIGIBLE FOR APPROVAL

In order to provide the intern with a well-rounded experience during the course of his internship, an adequate number of patients in each of the several major clinical divisions is a primary requisite. The experience of the Council indicates that an acceptable rotating internship can be offered only in general hospitals having a capacity of at least 150 beds, exclusive of bassinets, and having a minimum of 5,000 annual admissions, excluding the newborn. Further, three of the four major clinical divisions must be represented in such a hospital. Modern trends in practice emphasize the importance of experience in an active outpatient department. Hospitals which do not have a well-organized outpatient department should provide this type of training through affiliation.

The number of patients for which the individual intern is responsible is of primary importance in determining the value of the internship as an educational experience. If an insufficient number of patients are available for teaching purposes, the intern's experience becomes limited in scope. On the other hand, the assignment of an excessive number of patients prevents him from studying them thoroughly and from giving proper attention to all patients for whom he is responsible. In general, a service to which a single intern is assigned should not consist of more than 15 to 25 beds. In determining the number of patients for which the intern is responsible, consideration must be given to work required of him in the outpatient department, the emergency room, the laboratory, and similar assignments. In determining the proper number of internship positions in an approved hospital, private cases for which the intern is allowed to assume no responsibility beyond the completion of a history and physical examination, cannot be considered as available for teaching. In the event that the physician in charge does not wish to have his private patients used for teaching on the same basis as nonprivate cases, he should not expect the intern to assume responsibility for the history and physical examination or for any other routine procedure.

The number of patients for which the intern should be responsible may vary considerably, depending upon the service and the type of patients on it. Thus, one intern may well be able to assume responsibility for more than 25 chronically ill patients on a medical ward and on the other hand may not be able to give adequate attention to 15 patients on an acute surgical service. It is the responsibility of the chief of each service to which interns are assigned to evaluate at frequent intervals the amount of work being required of the interns to assure that they are not overburdened with routine responsibilities detrimental to their training and conversely, that they have an opportunity to observe cases of sufficient variety to assure a broad and comprehensive experience.

In applying a ratio of 15 to 25 beds per intern, it is evident that, in order to carry out a successful training program, a hospital of 150 beds requires an intern staff of from 6 to 10 interns. It is difficult if not impossible to conduct a satisfactory intern program with less than this minimum number, while an appreciably greater number of interns assigned in a hospital of this size will often result in a work load insufficient to stimulate and hold the intern's interest.

Hospitals which can otherwise qualify for approval but lack adequate clinical material of certain types may augment the education afforded their interns by establishing affiliations with other hospitals able to provide suitable experience in these areas. Such affiliating hospitals need not themselves be approved. Their

1. Many states require a rotating internship for licensure. For current information regarding the specific requirements of individual state examining boards, the State Board Number of THE JOURNAL should be consulted.

contribution to the training program is taken into consideration in evaluating the internship sponsored by the parent institution. Except in unusual circumstances, periods of training on an affiliating basis should not exceed 3 months in a 12 month program or 6 months in a 24 month internship.

These relatively short affiliating programs may be advantageously utilized to provide training in contagious diseases, psychiatric disorders, or other special areas. They should not be confused with the type of training plan in which two or more hospitals collaborate in sponsoring a joint program. In such instances, usually involving a university-connected hospital and others associated with it, the participating hospitals are ordinarily all independently approved and contribute more or less equally to the training program. The advantages to the intern of this type of program result from a broader experience with different types of diseases and different groups of patients and from the association of the intern with members of the teaching staffs of the several hospitals involved.

Registration by the Council on Medical Education and Hospitals and approval by the Joint Commission on Accreditation of Hospitals [2] are prerequisites for approval for intern training.

IV. THE HOSPITAL STAFF

The staff, both visiting and intern, should be composed of physicians who are graduates of medical schools acceptable to the Council. Physicians appointed to the visiting staff must have proper qualifications as to medical education and licensure. The staff must be limited to physicians whose professional and moral integrity are unquestioned, who are proficient in the fields of practice to which they devote themselves, who give personal attention to the patients under their charge, and who are willing to assume responsibility individually and as a group for providing ample instruction to the interns and to assist them in their work.

Depending on the size of the hospital and its staff, there should be a part-time or full-time instructor, teacher, or coordinator, with a suitable title, such a Director of Intern Education, whose duty it is to organize, coordinate, and supervise the educational program of the hospital in cooperation with and assisted by the intern committee and the hospital staff.

Since instruction of the interns by members of the courtesy staff is usually minimal, this group should be responsible for the medical history, the physical examination, and all other routine procedures connected with the management of their private patients. Adherence to this principle is particularly important when a full complement of interns is not available.

V. CLINICAL RECORDS

1. *Adequate Records Must Be Maintained.*—(See Section X, Nature of Intern's Duties.) The attending physician or surgeon is directly responsible for the accuracy and completeness of clinical records concerning all patients under his care, including the record of the work done by the intern.

2. *Endorsement of Records.*—All case records must show by signature the names of the persons who have written them in whole or part. Orders for treatment, for most diagnostic studies, and all progress notes must indicate the identity of the person responsible for them. The intern's record of his physical examination and diagnostic procedures should be verified by a competent supervising physician, calling attention to errors in observation and adding supplementary notes containing any relevant data which the intern may have omitted. If the intern's record is acceptable, the supervising physician should countersign and thus approve it. A summary, including the diagnosis, should be provided by the attending physician during the patient's stay in the hospital.

3. *Filing and Indexing Records.*—A competent medical record librarian should be in charge of the filing and indexing of records. All case records should be readily available for study or for reference. When a patient is admitted to the hospital, all previous records including outpatient records and, if possible, the attending physician's office record, should be available without loss of time. In addition to the usual index of patients by name and number, there should be cross indexing according to diagnosis and operation (surgical cases).

4. *Annual Report.*—Statistics concerning the professional work of the hospital should be compiled monthly and should be available to the medical staff at all times. An annual report should be prepared to include analysis of statistics for all departments. For each clinical department, at least the following data concerning private and ward services should be included in the report: (*a*) number of patients admitted or discharged, (*b*) number of hospital days of care or average daily census, (*c*) deaths and necropsies, (*d*) surgical procedures, and (*e*) number of cases admitted or discharged. A breakdown of discharges by diagnoses should be obtainable.

5. *Medical Audits.*—A medical audit is a periodic review of the medical records of selected cases by an impartial and competent committee composed of members of the professional staff of the hospital. Such a review considers the adequacy and completeness of the diagnostic examination, the quality of judgment used in the number and nature of tests employed, the correctness of the diagnosis, as recorded by the study of the patient and subsequent development and findings, the suitability of the treatment used, and the competence exhibited. Medical audits are helpful in determining the quality of medical practice in a hospital and thus in evaluating the hospital's teaching potential.

VI. PATHOLOGY

1. *The Pathologist.*—The pathologist should hold the degree of doctor of medicine from an acceptable medical school and have qualifications which are acceptable to the Council. The pathologist must devote sufficient time to the hospital to assure adequate supervision of the work done in the pathology laboratories, to examine or supervise the examination of all tissues removed in surgical operations and to furnish reports of the gross and microscopic findings, to perform or supervise the performance of all necropsies and render a full report of the findings, to assist in the teaching of interns, to supervise or arrange for supervision of the interns' work in the laboratory or on the hospital floors, to be available for consultation with members of the attending and intern staffs, to attend staff meetings, and to conduct or participate in clinical-pathologic and departmental conferences.

The pathologist should attend ward rounds frequently so that he may participate in the clinical evaluation of patients and confer with the intern and attending staffs regarding the selection and interpretation of clinical laboratory procedures, as well as gain an opportunity to detect any inadequacies in the performance of laboratory work in the hospital.

2. *Personnel.*—There should be adequate laboratories in the hospital for clinical and tissue pathology. These laboratories should be staffed and equipped to perform all procedures commonly used for diagnosis, management and therapy.

3. *Necropsies.*—The hospital must provide proper facilities for postmortem examinations. The necropsy rate has come to be recognized as an index of the scientific interest of the medical staff. Well-performed postmortem examinations and a study of their findings enable physicians to improve their clinical ability. No hospital will be approved for intern training which does not maintain an autopsy rate of at least 25% of its deaths, exclusive of stillbirths and cases released to legal authorities.

4. *Records.*—The result of each examination performed in the laboratory should be recorded in the departmental file and on the patient's clinical record. Complete copies of all reports on surgical specimens and copies of all autopsy protocols must be attached to the patient's charts with the original copy retained in the files of the department where they should be indexed by name, number, and diagnosis. Microscopic sections of specimens removed at operation or by necropsy should be filed in the hospital laboratory. The laboratory copy of certain types of routine reports need be retained for a limited period only.

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2. The recently established approval program of the Joint Commission on Accreditation of Hospitals is sponsored by the American Medical Association, the American Hospital Association, the American College of Physicians, the American College of Surgeons, and the Canadian Medical Association. It supersedes the hospital standardization program formerly conducted by the American College of Surgeons. Approval under the accreditation program is directed towards the adequacy of the professional care and administration of the hospital. It is not concerned with the evaluation of the hospital from the standpoint of its educational activities; i. e., internships or residencies. Office of the Joint Commission on Accreditation of Hospitals: 660 North Rush Street, Chicago 10, Ill.

VII. RADIOLOGY

1. *The Radiologist.*—The radiologist should hold the degree of doctor of medicine from an acceptable medical school and have qualifications in radiology satisfactory to the Council. He shall devote sufficient time to the hospital to supervise adequately the technical work of the department, to perform or supervise fluoroscopic examinations, to interpret films, to consult with staff physicians, and to instruct the interns. He should attend staff meetings and the meetings of his department as well as those clinical conferences in which his participation may be of value to the attending and intern staff.

2. *Equipment.*—This department should be equipped with suitable, safe apparatus. The rooms provided for fluoroscopy and for viewing roentgenograms should be large enough to accommodate both interns and attending physicians during the examination of patients or the interpretation of films.

3. *Records.*—A copy of each examination report should be kept in the department in addition to the copy filed in the patient's record. These reports and their original films should be filed and indexed by name, number, and diagnosis. Because of storage space problems it may be necessary to limit the time for keeping the original films to a period of 5 to 10 years, except for those films designated for the teaching file.

VIII. MEDICAL LIBRARY

It is essential that there be an adequate medical library readily accessible to the house staff. To facilitate its use, the library should be properly supervised. It should contain a useful collection of standard texts, monographs, and reference books. In addition, the library must make readily available to the intern staff, current issues of representative medical journals covering the major clinical fields. The library need not necessarily contain a large number of texts and journals particularly if other resources are available to it. Such outside facilities, however, should be considered supplementary to, and not a substitute for the hospital library.

It is the responsibility of the attending staff to guide the intern in his reading. This may be accomplished through requiring the intern to report current medical opinion concerning types of cases similar to those on his service, or through assigning special topics or selected journals for review by the intern at staff conferences or journal club meetings. The success of such activities will depend directly upon the stimulus and interest of the responsible staff member. If the intern is to be expected to carry out his assignment successfully, he must have adequate time for study and preparation. Requiring the intern to report on current literature will serve no useful purpose if his routine responsibilities are so heavy that his reading assignments become onerous.

IX. ORGANIZATION AND CONDUCT OF THE INTERNSHIP TEACHING PROGRAM

1. *The Staff and Its Organization.*—The attitude of the staff is of paramount importance to the development of a good intern training program. Its members must fully appreciate that the internship is an educational experience and must be willing to accept their share of responsibility for its conduct. No program designed primarily for service to the physician or the hospital can be considered as meeting the requirements of an approved internship.

Hospitals conducting intern training should be organized into departments or sections of medicine, surgery, pediatrics, obstetrics, pathology, and radiology. Hospitals lacking any of these services should afford experience in these branches through affiliation. Large hospitals will undoubtedly also have separate services in general practice and in one or more of the various specialties, such as anesthesiology, contagious diseases, neurology, neurosurgery, ophthalmology, otolaryngology, orthopedics, gynecology, physical medicine, psychiatry, and urology. While a highly developed organization of this sort may well be beneficial from the standpoint of patient care, it may prove detrimental to internship training. Any effort to arrange a rotation through all or even a majority of the above-mentioned services during a 12 month period will inevitably result in a kaleidoscopic experience which decreases in instructional value in direct proportion to the increase in the number of services encompassed. Internship planning committees should study the situation in their hospital and in arranging the rotation of assignments place the interest of the intern above that of service to the hospital.

In a rotating internship, the schedule should include assignments to services in medicine, surgery, pediatrics, and obstetrics, but the time spent on each service need not remain fixed for all interns. Rotation through other services should be arranged with a view to the future plans of the specific intern and the needs of the hospital. Under this plan the service needs of some of the more highly specialized departments would be supplied in part by rotating interns, in part by straight interns or by residents. If training is needed by a given intern in some specialty to which he is not assigned, it may be provided through work with consultants on his patients, on other services and at times by outpatient experience.

It is important that the intern have an opportunity to observe and participate in the total care of the patient. In order that this may be accomplished, he should follow as many patients as possible through their full hospital course, including outpatient observation. Rotation which does not provide a minimum of two months of training on a given service fails to meet this objective.

Each department or section should have a chairman who serves for at least one year. He should be well qualified for this position by training and experience in his special field, should be responsible for the general conduct of the clinical work in his department, and should help to formulate and execute the intern training plan. Frequent rotation of attending physicians in charge of the various services should be avoided. Assignments should be made so that the intern has ample opportunity to meet the attending physicians frequently for the conduct of organized ward rounds or clinics and for the study and care of the patients for whom he is responsible. In order to assure the proper teaching relationship between interns and attending physicians, no intern should be expected to assist an unreasonable number of attending or visiting physicians.

2. *Intern Committee.*—There should be a committee of the staff chosen from the chairmen of the several departments or from among able and interested departmental representatives. This committee should assume responsibility for the organization, supervision, and evaluation of the plan of intern instruction.

3. *Director of Intern Education.*—The appointment of a director of intern education on a full-time or part-time basis may be desirable in many hospitals. The director should be a person who has had experience and training that qualify him to plan and direct a sound program of instruction with the assistance and cooperation of other members of the intern committee and the staff. One of his important responsibilities should be to observe closely the operation of the program. He should be vested with sufficient authority to insure that his recommendations are carried out effectively. In cooperation with the chairmen of the several departments and the administration, he should be responsible for the integration of the various educational activities of the hospital.

The teaching obligations of individual staff members cannot be delegated to the director of intern education, even though it is to be expected that he will take an active part in the teaching program. His function is to organize and supervise a program which will increase the effectiveness of the participation of the individual staff members.

4. *Orientation.*—It is recommended that there be a period at the beginning of the internship devoted to orienting the intern to the administrative and professional organization of the hospital and to the facilities available in the laboratories and to such ancillary services as nursing, social service, dietetics, physical therapy, the record room, and the pharmacy. This orientation should be given early in the course of the internship and should be followed by conferences in which personnel from these several services participate.

5. *Classroom Facilities and Teaching Aids.*—The availability of suitable rooms for conferences, seminars, and other educational activities of a well-conducted teaching program is highly desirable, if not essential. Attempting to hold discussions of a formal or informal nature in the hospital's corridors or other areas not intended for the purpose is unsatisfactory. Teaching aids such as projectors, x-ray view boxes, blackboards, and the like should be provided. Teaching films may be successfully

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employed in presenting certain types of material not otherwise available. It should be stressed, however, that none of these methods of instruction supplant the basic features of a satisfactory internship program—bedside teaching.

6. *Educational Program.—a.* Bedside Teaching: The most important phase of intern instruction consists in daily, regularly organized ward rounds with well-conducted teaching at the bedside. By this is meant systematic instruction of the intern by the attending physician with an ample discussion of the history, the physical examination, the clinical and laboratory findings, the diagnosis, and the treatment of each patient. The social and psychologic aspects of the case should receive proper emphasis. It is the duty of the attending physician in direct charge of the patients assigned to the intern to conduct such teaching. It cannot be delegated to others, though it should be supplemented by supervision of the intern's work by the director of intern education, junior staff members, and residents. Assignment of interns to duties which have no educational value should be avoided.

b. Conferences: Clinical conferences are second in importance only to bedside teaching in the formal educational program. To be effective, they require planning and preparation on the part of both staff and interns and active participation by the latter group. The organization and conduct of clinical conferences of good caliber is a measure of the effectiveness of the teaching program.

All conferences should be scheduled at hours and places convenient to the house staff. Interns should be excused from attending such conferences only for emergency calls or equally cogent reasons. The number and variety of conferences will of necessity vary with the size of the hospital and other factors. They should be of sufficient frequency to become an accepted feature of the intern's schedule but not so frequent that they interfere with the proper care of patients. The following suggestions are offered as a guide.

(1) *Departmental Conferences.*—In smaller hospitals each major department should conduct at least one staff conference monthly, scheduled in such a manner that a conference takes place on the same day each week. In larger hospitals, departments may desire to conduct weekly conferences. In such cases the requirements for the intern's attendance can be modified accordingly. The more highly specialized departments should schedule conferences as often as may be considered necessary by the departmental staff.

(2) *Clinical Pathological Conferences.*—These important conferences should be conducted by the pathologist in cooperation with the several clinical departments. While the frequency of such conferences will vary with local conditions, they should be held at least once each month.

(3) *X-Ray Conferences.*—These conferences may be scheduled separately or held conjointly with the other departmental meetings. Effective teaching can be carried out by bringing the interns, including those not familiar with the case, into the discussion of the x-ray findings. In addition to formal conferences, the roentgenologist should be available to review films on the intern's patients with him.

(4) *Record and Fatality Conferences.*—The treatment and management of all fatal cases should be subjected to critical analysis at departmental meetings attended by the chairman of the department, the attending physician, and other staff and house physicians including the interns. At the same or similar departmental conferences, the records of all patients whose treatment might be the subject of controversy should be carefully reviewed and discussed.

These conferences may be informal but should not be perfunctory. They should be held soon enough after a patient's death or discharge for the patient's history and findings to be fresh in the minds of all concerned. Few phases of an intern's training can approach these conferences in the opportunity they provide to instill in the intern an attitude of critical examination of his clinical judgment and skill.

(5) *Journal Club Conferences.*—An effective method of stimulating the intern staff to read the current literature is presented through informal discussions centering around the more important articles in the various journals, especially articles immediately pertinent to the intern's clinical experience. They may be conducted on a departmental basis, rotated through departments, or be general in nature. In view of the demands on the time of the interns and attending staff, they may be conducted as luncheon conferences if facilities permit.

7. *Tissue Committee.*—Under some circumstances, it may be desirable to establish a special committee (*a*) to study and to report to the staff or the Executive Committee of the staff the agreement or disagreement between preoperative diagnosis and reports given by the pathologist on tissues removed at operation and (*b*) to review the records and materials pertaining to all normal tissues removed by surgical means.

The committee thus lends objective assistance to the pathologist in evaluating the clinical judgment of members of the surgical staff in those instances in which such an evaluation appears to be indicated. Such a committee should be comprised of at least five senior members of the staff and should include specifically the chiefs of the pathology, surgical, and gynecological services.

8. *Special Features in Major Departments.—a.* Internal Medicine: This department should afford each intern adequate instruction and experience in general medicine, including the psychologic, social, and somatic aspects of disease, and in such medical procedures as are commonly employed in the practice of internal medicine. Precaution should be taken on large services that medical care is not so divided among the various medical subspecialties that the intern loses sight of the patient as a whole and as a person, or that the time spent on a service is not so fragmented that the intern receives only a superficial orientation to several fields. On such services, there is also particular danger that the intern may be relegated to a minor role in the care of the patient in favor of the resident or research assistants.

b. General Surgery: Surgical training should be planned to emphasize diagnosis and preoperative and postoperative care, and not skill in operative technique. Special attention should be given to problems encountered in the emergency room and to minor surgical procedures as carried out in the outpatient department. In the operating room, the intern's role should be that of an assistant rather than of an operator. He should not be required to spend excessive time in the operating room to the neglect of the other phases of his training in this department. The dressing of surgical wounds should be regarded as an important part of his experience, giving him a particularly valuable opportunity to observe the immediate effects of surgical procedures and treatment. He may obtain instruction and experience in the use of anesthetics under the supervision of a trained anesthesiologist. In large hospitals where the surgical specialties are organized as separate services, the assignment of the intern should be determined by the intern committee and the surgical staff after careful consideration. The precautions noted relative to assignments to the medical subspecialties are equally applicable to the surgical subspecialties.

c. Obstetrics: The intern is expected to assist at the delivery of all patients assigned to him and to deliver a minimum of 10 patients under direct supervision. Limited training in obstetric anesthesia is desirable. Emphasis should be placed on teaching the intern the proper management of normal labor and delivery and on the recognition of the complications of labor which require expert consultation. A most important aspect of intern education in obstetrics is the experience to be gained in the outpatient department with prenatal patients and their problems. Too frequently, the intern is not given this opportunity with the result that his concept of obstetrical care is distorted and his knowledge of the patients' problems as he will encounter them in his office, is limited. If an active prenatal and postnatal service is not carried out at the hospital, arrangements should be made for the intern to obtain this type of experience through affiliation.

d. Pediatrics: Training in pediatrics, in addition to affording the intern an adequate amount of instruction and experience in the medical, surgical, and psychiatric aspects of the diseases of infancy and childhood, should include experience in the care of the newborn and should acquaint him with the normal patterns of growth and development. In view of the importance of newborn care in the work of the general practitioner, obstetrician, and pediatrician, it is incumbent on all hospitals to afford ample

experience in this field to at least all interns contemplating the possibility of undertaking general practice.

Well child care, including immunization procedures, is assuming increasing importance in the work of general practitioner and pediatrician. Wherever possible the hospital should offer training in this field through well child conferences and well baby clinics. Straight pediatric internships should provide training in surgical as well as medical pediatrics including their subspecialties.

e. Pathology: The intern should receive supervised experience in the performance of all clinical laboratory procedures which are ordinarily employed in the initial study of the patient. In addition, through formal and informal conferences with the pathologist, the intern should become thoroughly familiar with the availability, significance and limitations of those procedures which are usually performed only in the central hospital laboratory. He should be required to be familiar with the pathological studies of surgical specimens and necropsy material which concern his own patients. Except in emergencies no assignment should be permitted to interfere with his attendance at the postmortem examination of any case which has been under his care. He should assist in the preparation and presentation of clinical-pathological conferences when cases assigned to him are being reviewed. Interns assigned to the department of pathology should assist in the performance of necropsies and in the examination of surgical specimens. They should also receive instruction in interpretation and techniques of clinical laboratory procedures.

f. Psychiatry: If inpatient psychiatric services are not available in the hospital, the education of the intern in this field should be provided by psychiatrists assigned to the various major clinical services. These physicians should not only assist in the management of acute psychiatric cases but should provide a continuous service relating to all types of patients' problems, thus furnishing an additional contribution to the total care of the patient. Where psychiatric outpatient clinics exist, the intern should have the benefit of experience with this type of patient.

g. Radiology: The intern should be familiar with the interpretation of x-ray films on all patients assigned to him. Whether radiologic training should be offered as a separate service in addition to its inclusion in the daily care of patients on all services, must be decided on the basis of local conditions and after careful consideration of the factors involved by the chairman of that and other departments.

h. Outpatient Department: The changes in medical practice resulting from new drugs and other advances in medical care require reevaluation of the importance of outpatient training during the internship. Hospitals should provide to all interns carefully supervised experience in ambulant care under circumstances comparable to the office practice of medicine. Outpatient assignments should be closely correlated with corresponding services in the hospital, thus affording the intern an opportunity to see serious illness in its earlier aspects and encouraging follow-up work and observation of hospitalized patients over a longer period of time. A well-supervised teaching experience in the outpatient department should give the intern an understanding of the functions of community health agencies.

X. NATURE OF THE INTERN'S DUTIES

Each intern caring for and in charge of patients should obtain and write or dictate the history, perform and record the results of the physical examination, and state his diagnosis on all patients assigned to him. He should perform laboratory work of such nature as will give him familiarity with and competence in the performance of those procedures which the practicing physician is ordinarily or usually called upon to perform. In addition, under adequate supervision he may be given some experience in the hospital laboratories with more complicated and difficult tests. He should be familiar with the proper use of such tests and the interpretation of the results. He should not be burdened by an excessive amount of routine procedures of limited educational value, nor should he be assigned to tasks of a nonprofessional nature. The nonoperative and nonspecialized treatment of each patient under his care is his responsibility under the critical guidance and supervision of the attending physician. Such supervision should be greater during the early stages of his internship with increasing responsibility afforded the intern as his training progresses and his capabilities are demonstrated.

He should make ward rounds with the attending and resident staffs at suitable intervals, preferably daily. At such times, he should visit the patients under his care, and others, discussing their progress. He should receive instruction, information, criticisms, advice, suggestions, and assistance from his superiors, who thus contribute to his education. When serving on surgical services, he should attend operations to which he may be assigned. He should act in the capacity of an assistant, as directed by his superiors, thus attaining knowledge and experience with respect to operating room procedures and technique.

The intern should make frequent progress notes on the record describing the patient's clinical course, record all treatment or special diagnostic procedures, or make certain that they are promptly and correctly recorded. When a patient is discharged, the intern should write a concluding note which summarizes the patient's course in the hospital, describes the patient's condition as he leaves, and states the final diagnosis.

He should attend autopsies on his own and other patients, seminars, staff meetings, clinical pathological and radiologic conferences, and meetings at which there is a discussion of patients' records subsequent to discharge. In those hospitals with emergency and outpatient services, he should be given assignments in which the basic principles of his professional duties are the same as those on the inpatient service. He should meet the family and friends of his patients and judiciously confer with them. He should consult with social service regarding the social, emotional, and environmental aspects of the patient's disease and the community resources available.

In view of the importance of every physician learning to function as a member of a team, the intern should consult freely with the nursing staff, dietitians, and physical and occupational therapists as well as with social service workers concerning all problems which lie within their respective fields of interest. Similarly, he should not overlook the valued assistance he can frequently obtain from his patients' religious counselors. He should report all notifiable diseases as required by law to the proper authority.

Not infrequently the intern is given the opportunity to take part in the instruction of medical students, nurses, social workers and others who participate with him in teaching and service activities of the hospital. Such opportunities are to be welcomed as providing a stimulus to the intern to add to his own knowledge and understanding of a subject and to organize and clarify his thinking. Such opportunities also serve admirably to introduce the intern to the role of teacher, a role which in one capacity or another he will be called on to fill at many points in his later career.

An intern's duties and responsibilities are not discharged on a "nine to five" basis. While an acceptable internship provides for a reasonable amount of free time, his thought for and contact with his patients should be on a "round the clock" basis. He is thus properly subject to call at all times except when specifically off duty and arrangement must be made to ensure prompt availability. Such close attendance on his patients is an important factor in the educational experience of the intern.

Since the intern is a full-time student, he should devote his time to his educational program and may not accept outside remunerative positions. Exceptions to this principle should be made only with the approval of the hospital staff and administration.

XI. MISCELLANEOUS

1. *Rules for the Intern Staff.*—A set of rules and regulations setting forth the intern's duties and privileges should be provided by the hospital. In a well-organized, comprehensive program these may be expanded in the form of a manual to include floor procedures, general orders, and the like in addition to defining the intern's responsibilities.

2. *Record of Interns' Assignments and Certificate of Service.*—It is advantageous both to the hospital and to the intern that an adequate record be kept of his activities on each service to which he is assigned. Such information is helpful to the hospital in evaluating its intern training program and is required by some state licensing boards and other agencies. At the completion of his internship, he should be furnished with a certificate of service, attesting to the satisfactory completion of

his training period. The hospital is justified in withholding such a certificate only if the intern fails to complete his internship or if his performance has been such as to indicate that he is unfit for the practice of medicine. Under no circumstances should the hospital arbitrarily refuse to issue such a certificate for relatively minor reasons. In the event of illness necessitating the intern's withdrawal from training, the hospital may properly issue a certificate to include the period of training completed.

3. *Interns' Stipends.*—Traditionally, the internship has been considered an extension of the physician's education during which he provides the hospital with certain services in return for his experience. The increased costs of a medical education and the additional financial obligations with which many graduates are burdened have made the payment of a reasonable stipend to interns which may be considered as a scholarship for graduate study, a widely accepted practice. However, when a hospital resorts to the payment of excessive salaries, bonuses or other forms of remuneration to attract an intern staff, there is reason to question the adequacy of its educational program.

4. *Interns' Living Quarters.*—It is expected that the hospital will provide its intern staff with healthful food as well as adequate living quarters and recreational facilities. The hospital may also provide suitable living accommodations for married interns, preferably within or adjacent to the hospital.

5. *Interns' Health.*—The hospital should be concerned with the intern's health during his period of service. Each intern should be given a thorough physical examination including a roentgenogram of the chest and routine laboratory studies at the beginning of, and periodically as might be indicated during his internship. A member of the attending staff should be assigned the responsibility of acting as personal physician to the interns with a readily available consultation service provided by other members of the attending staff. The hospital should be willing to accept a reasonable share of the responsibility for the continuing care of long-term illness contracted by the intern directly in the discharge of his duties.

6. *Intern-Resident Relationship.*—In a hospital conducting both intern and residency training, care must be exercised to assure that neither group is neglected in the training program. The duties and responsibilities of both intern and resident should be clearly defined to preclude this possibility. It is obvious that the intern cannot be given the same degree of responsibility as that assumed by the resident. However, the intern should not be relegated to a position of an assistant to the resident performing routine duties of little or no educational value. A well-integrated intern-resident program can enhance the value of the training received by each member of the house staff. Conversely, a program in which either the intern's or resident's training is stressed to the neglect of the other will result in a lowering of morale and consequent dissatisfaction. It is the responsibility of the chief of each service to assure that every member of the house staff is receiving the attention he requires and is given responsibility commensurate with his ability and stage of training.

7. *Hospital-Intern Agreement.*—A formal agreement in which mutual obligations are defined should be entered into between the hospital and the applicant at the time of his appointment. This agreement must be honorably fulfilled by both parties and should be terminated only by mutual consent. A breach of the agreement by either a hospital or an intern is not condoned by the Council. Whenever complaint of such a breach is made, it is the policy of the Council to ask each of the parties involved to submit an explanatory statement. Such statements become a part of the physician's and the hospital's record and are made available on request to authorized agencies.

XII. ADMISSION TO THE APPROVED LIST

Application for Approval.—Hospitals that desire to qualify for approval for intern training should apply to the Council on Medical Education and Hospitals of the American Medical Association, 535 North Dearborn Street, Chicago 10. Appropriate forms for this purpose will be furnished on request. They should be completed with care by the hospital administrator or a member of the staff who is acquainted with the hospital's proposed program, with one copy to be returned to the Council's office. On receipt of the application, arrangements will be made for a member of the Council's staff to visit the hospital for the purpose of reviewing the training program and inspecting the hospital's facilities.

Approval for intern training, including the number and type of internships is granted on an annual basis, through publication of the name of the hospital in the list of approved programs in the Internship and Residency Number of THE JOURNAL. This special issue of THE JOURNAL ordinarily will appear the last week in September. Recognition of a hospital for intern training may be withdrawn at any time that it is adjudged by the Council that the hospital fails to comply with one or more of the requirements set forth in these Essentials of An Approved Internship or in the Essentials of a Registered Hospital. Approval may also be withdrawn from an internship program which for two consecutive years fails to obtain at least two-thirds of their stated complement of interns. Under such circumstances it is improbable that a balanced training program can be maintained. Further, those interns who are appointed must assume a greatly increased work load with a resultant deterioration in their educational experience. Hospitals whose approval is withdrawn on this basis may apply for reinstatement to the approved list on presentation of evidence that would lead to a reasonable conclusion that they will be successful in appointing interns in sufficient numbers to maintain a satisfactory training program. This policy is necessary to insure that an applicant will receive a sound educational experience when he accepts an appointment to a hospital approved by the Council. When the number of interns appointed by the hospital is appreciably below that required, it becomes impossible for the hospital to provide the training to which the intern is entitled.

APPENDIX: SUGGESTIONS TO HOSPITALS NOT ELIGIBLE FOR INTERNSHIP APPROVAL

Hospitals which are unable to qualify for internship approval should give consideration to other means of providing adequate medical service. It should be noted that less than 15% of the hospitals in this country are approved for intern education. Although the immediate availability of physicians on a 24 hour basis and the maintenance of adequate clinical records is a major problem facing many hospitals lacking intern staffs, unquestionably a large proportion of them provide a high level of patient care despite this lack.

The following suggestions for providing adequate medical service on a 24 hour basis are offered to the staffs of hospitals unable to qualify for internship approval:

1. Depending on the size of the hospital, one or more younger physicians who have completed their formal hospital training may be employed to assist the attending staff in the care of their patients by performing certain of the functions ordinarily carried out by the house staff. An adequate salary and living quarters within the hospital or on the hospital property should be provided.

2. If the size of the hospital staff makes it practicable, responsibility for night duty, or 24 hour duty, may be arranged for through rotation of this assignment among the members of the junior attending staff.

3. If the junior staff is too limited in number, these duties may be rotated through the entire attending staff.

4. A junior attending or courtesy staff physician who is just starting the practice of medicine in the community may be employed on a part-time basis to care for emergencies and perform house staff duties during the night.

5. Nurses, qualified technicians, and other ancillary personnel may be trained to perform many procedures ordinarily assigned to the intern staff.

With respect to the maintenance of adequate records, hospitals not conducting educational programs may give consideration to developing a type of clinical record that will be more economical of time and effort than the type required of hospitals conducting educational programs and still include all essential data. A concise, inclusive clinical summary along with a brief history and report of physical examination, perhaps of a check list type, may frequently suffice for this purpose, particularly if supplemented by copies of records from the physician's office. Except for emergency admissions, the hospital could require that each referring physician supply a copy or summary of the patient's office examination and diagnosis to serve as an admission note.

MEDICAL LITERATURE ABSTRACTS

UNITED STATES

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6:381-468 (Nov.) 1952

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Industrial Medicine in Sweden: Recent Experiences and Future Problems. S. Forssman.—p. 407.
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Occurrence of Anthrax Bacilli in Carpet-Wool Industry in United States. R. S. Lloyd.—p. 421.
Carbon Tetrachloride Mixtures in Fire Fighting. H. H. Fawcett.—p. 435.
Relative Toxicity of Lanthanum, Tantalum, and Thorium Compounds in Developing Chick Embryo. L. J. Machlin, P. B. Pearson and C. A. Denton.—p. 441.
Problems Encountered in Field Use of Thomas Autometer. P. M. Giever.—p. 445.

A.M.A. Arch. Surgery, Chicago

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*Diagnosis and Treatment of Pyloric Hypertrophy in the Adult. W. P. Kleitsch.—p. 655.
Catastrophic Complications of Hiatus Hernia. W. P. Kleitsch.—p. 665.
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Endometriosis of Vermiform Appendix. R. Romanus.—p. 682.
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Cancer of Tonsil. H. A. Teloh.—p. 693.
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*Spontaneous Rupture of Esophagus: Report of Successful Case with Cardiac Arrest and Review of Literature. G. W. Ware, B. I. Shinder and E. W. Davis.—p. 723.
*Comparison of Wound Healing With and Without Dressings: Experimental Study. C. J. Heifetz, M. S. Lawrence and F. O. Richards.—p. 746.
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Secondary Carcinoma of Penis Arising from Carcinoma of Rectum. C. Ney.—p. 783.
Primary Carcinoma of Bartholin Gland Treated by Radical Surgery. B. S. Abrams, J. Bauer and E. M. Bricker.—p. 790.
Acute Free Perforation of Peptic Ulcer: Complication of Ulcer Diathesis: 139 Consecutive Cases. F. Glenn and C. S. Harrison.—p. 795.

Pyloric Hypertrophy in the Adult.—Congenital pyloric hypertrophy persists into adult life if it is not corrected surgically in childhood, and this suggests why pyloric hypertrophy in adults is not as rare as some believe. The four cases in this series were discovered in less than five years. In uncomplicated cases of adult pyloric hypertrophy the history is typical and differs from an ulcer history in that the epigastric pain is aggravated by the ingestion of food and is largely relieved by vomiting. Peptic ulceration either in the stomach or the duodenum or within the narrowed, elongated pyloric canal is a common complication of pyloric hypertrophy in adults. Roentgenograms are characteristic. They show an elongated and narrowed pyloric canal, the thickened sphincter muscle giving the impression of a filling defect surrounding the pyloric antrum. The characteristic elongation and narrowing of the pyloric canal is referred to as the "pyloric string sign." Pyloric hypertrophy in adults requires surgical treatment, which cannot be standardized, but must be individualized to cope with the pathological conditions discovered at operation. If pyloric hypertrophy is the only defect, simple transection of the sphincter, carrying the incision well into the stomach and duodenum, with transverse closure of the resulting defect (the Heineke-Mikulicz pyloroplasty) has the advantage of simplicity. If, however, muscular hypertrophy is such that transverse closure of a transection might be awkward because of difficulty in inverting the thickened muscle, the Billroth I partial gastrectomy or some modification of it might be preferable. If a duodenal ulcer coexists, the type of gastrectomy ordinarily used in the treatment of this condition is indicated, whereas a coexistent gastric ulcer would require an en bloc type of resection.

Spontaneous Rupture of Esophagus.—Spontaneous rupture of the esophagus occurs, as the name implies, without preexisting esophageal disease and in the absence of a foreign body or instrumentation. The act of vomiting is intimately associated with this catastrophe. Ware and associates suggest that this condition be referred to as "rupture" rather than "perforation," since the latter suggests a foreign body or instrumentation and should be reserved for such cases as well as for those in which there is preexisting disease. Reviewing the English literature, they found 85 cases that fulfilled the criteria for spontaneous rupture of the esophagus; 70 additional cases were rejected as not fulfilling these criteria. One case of their own observation is added to the 85. Commenting on the mechanism of rupture, the authors suggest that two mechanisms of derangement of the act of vomiting may occur: 1. As a result of repeated stimuli the vomiting center may become fatigued. 2. Owing to a confused mental state there may be poor coordination of the mechanism during the actual act of vomiting. Either or both of these factors may be present, particularly in patients recovering from acute alcoholism. Spontaneous rupture of the esophagus may also result from a sudden rise in pressure within the gastrointestinal tract during defecation, while lifting weights, or during induction or recovery from anesthesia. The diagnosis should be suspected in every case with combined thoracic and abdominal symptoms. The commonest symptoms are epigastric pain and vomiting. The single most valuable test is the roentgenogram of the chest. Once the diagnosis is established or suspected, thoracotomy must be done, all other measures being only palliative. In the case described here, a correct diagnosis was made and thoracotomy was successful. Cardiac arrest occurred during the operation, but the patient recovered and has remained well.

Wound Healing With and Without Dressings.—During routine surgical inspection it is not unusual to find that the dressing covering the inferior angle of an inguinal hernia wound has been dislodged, exposing this portion of the wound. It was noted that sometimes the uncovered portion was healing better than the covered portion. Several inguinal hernial wounds were therefore left completely uncovered except for a loosely applied sterile towel for an hour or two at the conclusion of the operation. These wounds healed as well as those having the customary dressings. After citing several other pertinent reports, the authors describe reports on rabbits. They found that in rabbits well-coaptated surgical wounds heal equally well through all the layers whether dressings are applied or not. Sealing and gluing of these wounds by a coagulum of fibrin and red cells occur within minutes. This gluing gives the wound considerable tensile strength even without the support of sutures, and the presence of sutures would seem to insure the maintenance of the seal against ordinary postoperative strain. The seal also

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Titles marked with an asterisk (*) are abstracted.

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seems to be an effective barrier against bacterial contamination from external sources. Thus it would seem that a dressing is not needed for protection of the average surgical wound from bacterial contamination and for its effect on wound healing. Since dressings are also used for splinting, for their hemostatic effect, for keeping "dead spaces" closed, and for protection against trauma, it is obvious that they are needed for many wounds. Even so, some of these needs for dressings can be fulfilled in the first 24 hours after surgery, after which the dressings may be removed. Since experiments have shown that considerable epithelial debris accumulates under the dressings after the third day, keeping dressings on for a longer period may conceivably have an adverse effect. If the routine application of dressings is not necessary, there are obvious advantages in leaving them off, such as the economy of surgical supplies, the saving of time and effort, the sparing of hospital personnel, the elimination of skin irritation from adhesive tape, and the opportunity for more frequent observation of the wound.

Alabama State Medical Assn. Journal, Montgomery

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Medical and Surgical Treatment for Parturitional Hemorrhage. E. G. Waters.—p. 95.
Approach to a Gastrointestinal Problem. J. F. Crenshaw.—p. 99.
Improved Care of Mentally Ill at County Level: from Jail to Hospital: Survey of First 12 Months of Operation of Mobile County Mental Unit. R. W. Cowden.—p. 107.

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Virus Infection During Pregnancy as Cause of Congenital Malformation of Heart. W. A. Clyde.—p. 131.
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American Journal of Orthopsychiatry, New York

22:667-888 (Oct.) 1952. **Partial Index**

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Id.: III. Treatment of Data. I. N. Mensh.—p. 764.
Picture-Frustration Technique as Measure of Hostility and Guilt Reactions in Adolescent Psychopaths. J. D. Holzberg and F. Hahn.—p. 776.

American Journal of Physiology, Washington

171:1-256 (Oct.) 1952. **Partial Index**

Evidence That Glycolysis Contributes to Gastric Acid Secretion. H. W. Davenport and V. J. Chavré.—p. 1.
*Interrelation Between Cephalic and Gastric Phases of Gastric Secretion. L. R. Dragstedt, H. A. Oberhelman Jr., E. R. Woodward and C. A. Smith.—p. 7.
Weight Changes and Water Consumption of Rats Exposed to Whole-Body X Irradiation. L. F. Nims and E. Sutton.—p. 17.
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Metabolic Effects of Anesthesia: VI. Mechanism of Metabolic Acidosis and Hyperglycemia During Ether Anesthesia in the Dog. W. R. Brewster Jr., J. P. Bunker and H. K. Beecher.—p. 37.
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Effect of Renal and Parathyroid Function on Disappearance of Intravenously Injected Calcium Chloride. J. R. Hines and S. Freeman. —p. 114.
Combined Effects of Calcium and Potassium on Contractibility and Excitability of Mammalian Myocardium. J. P. Green, N. J. Giarman and W. T. Salter.—p. 174.
Dynamics of Venous Collapse in Superior Vena Cava System. G. A. Brecher, G. Mixter Jr. and L. Share.—p. 194.
Effect of Hypoxia and Anemic Anoxia on Uterus. E. J. Van Liere, G. B. McCarty and J. G. Matthews.—p. 245.
Effect of Unilateral Nitrogen Breathing Upon Pulmonary Blood Flow. R. M. Peters and A. Roos.—p. 250.

Cephalic and Gastric Phases of Gastric Secretion.—The possible interrelation between the cephalic and gastric phases of gastric secretion was studied in patients with duodenal ulcer and in animals. The human subjects had undergone resection of the lower portion of the stomach with subsequent development of gastrojejunal ulcers, and the animals had been provided with vagus-innervated total stomach pouches or Pavlov or Heidenhain pouches with subsequent denervation or transplantation of the antrum into the duodenum or colon. In the patients a hypersecretion of gastric juice was still present after removal of the antrum, and these patients still displayed a positive secretory response to insulin hypoglycemia. Both were abolished by subsequent vagotomy. In dogs provided with vagus-innervated total stomach pouches, removal of the antrum produced a 23% average reduction in the output of hydrochloric acid. Subsequent crushing of the gastric vagus nerves decreased the acid output a further 70%, indicating that antrum function and the release of gastrin are not essential to vagus secretory function. It is possible, however, that in some manner not at present fully understood the gastrin mechanism may facilitate the secretory function of the vagus nerves.

American Journal of Public Health, New York

42:1367-1506 (Nov.) 1952. **Partial Index**

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Journal of Bacteriology, Baltimore

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Production of Vitamin B_{12} by Various Strains of Actinomycetes. A. P. Saunders, R. H. Otto and J. C. Sylvester.—p. 725.

New England Journal of Medicine, Boston

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Hernia Through the Incisura of Tentorium Cerebelli in Connection with Craniocerebral Trauma. D. Munro and W. R. Sisson Jr.—p. 699.
*Canicola Fever: Report of First Case in Connecticut and Review of Literature. M. E. Gordon.—p. 708.
*Tuberculous Meningitis: Treatment of Spinal Block with Intrathecal Administration of Tuberculin. E. C. Atkins and M. M. Cummings. —p. 715.
Medical Progress: Tuberculosis. D. S. King.—p. 718.
Hiccups Complicating Myocardial Infarction. H. R. Swan and L. H. Simoson.—p. 726.

Canicola Fever.—Gordon feels that hepatocellular disease is often ascribed to a viral agent without adequate investigation and that leptospiral infections of the liver can simulate viral hepatitis. The case of a man in whom canicola fever appeared five days after swimming in stagnant waters is reported. Canicola fever, or infection with Leptospira canicola, is similar to Weil's disease (due to Lept. icterohaemorrhagiae), but is transmitted to human beings directly or indirectly by dogs. It may be differentiated serologically from infection caused by Lept. icterohaemorrhagiae, although in studies with the electron microscope the two strains of leptospirae were found to be identical in both morphology and motility. Over 200 cases of canicola fever have now been reported in the world medical literature. The 26 cases mentioned to date in the American literature are tabulated, and the first case from Connecticut is described in detail. A liver biopsy done on the 31st day of the disease showed mild, nonspecific, hepatocellular damage. There is considerable variance in the clinical manifestations of the disease, and, although its

incidence is low, occasional cases of hepatocellular disease and meningitis of undetermined etiology are probably due to the leptospiral organisms. The diagnosis of canicola fever is established by the Schüffner agglutination lysis test on the patient's serum. Antibodies appear between the 10th and 13th days and reach their maximum in 30 days. A simple complement fixation test has been devised. Cross-agglutinations occur with other commoner leptospiral species, but the significant antigen titer predominates. Although direct culture methods are available, animal inoculation is better suited for demonstration of the spirochete. The Syrian hamster is the best laboratory animal for this purpose.

Tuberculin Intrathecally for Spinal Block in Tuberculous Meningitis.—The treatment of spinal block occurring in tuberculous meningitis was unsatisfactory until Smith and others of Oxford in 1950 described their success with intrathecal administration of purified protein derivative of tuberculin (PPD). Autopsy in one patient who had died after temporary improvement had been obtained revealed that the exudate usually seen surrounding the brain stem in this disease was absent. This suggested that the effect of the purified protein derivative was to dissolve the exudate that had produced the block. Atkins and Cummings present the detailed history of a patient in whom they were able to confirm the favorable results obtained by the Oxford group. It is postulated that the spinal canal block in this patient was broken by a fibrinolytic reaction evoked by the injection of purified protein derivative. As demonstrated by Smith, such an injection is followed by a transitory outpouring of leukocytes into the spinal fluid. Polymorphonuclear leukocytes contain an enzyme, leukoprotease, capable of digesting proteins and of forming peptones and polypeptides, both of which are present in exudate. With the death of the polymorphonuclear leukocyte, the enzyme is liberated into the surrounding fluid. It is likely that antienzymes are present in amounts too small to inhibit the leukoproteases released by the disintegrated leukocytes. Another enzyme, erepsin, present in the leukocytes, will break the polypeptides into free amino acids. Perhaps these cells furnish enough enzymes to lyse the exudate causing the block. In this way, the tubercle bacilli that are usually buried in the lesion may be brought into contact with the streptomycin and thus more effectively destroyed. In this patient, the treatment was discontinued after the block was relieved, as evidenced by ventriculograms and spinal fluid manometric studies. Since trephines are done before intrathecal therapy with purified protein derivative is instituted, ventriculograms should be made. In this way, the block can be better localized and the therapy evaluated. It is recognized that this type of therapy may be dangerous and should be used cautiously.

New Jersey Medical Society Journal, Trenton

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Chronic Thrombotic Occlusion of Abdominal Aorta. B. J. Carroll, H. S. Yood and S. H. Schwartz.—p. 466.
*Oxygen Therapy for Blood Donors. T. K. Rathmell.—p. 468.
Conservatism in Skin Therapy: New Cod Liver Oil Lotion. M. H. Holland.—p. 469.
Recognition and Management of Symptoms Associated with Depressive States. S. A. Sandler.—p. 472.
Pseudocysts of the Lung. E. Levitzky, A. Heyman and J. H. Bromberg. —p. 477.
Measles Modification: Rational Employment of Immune Serum Globulin. G. Heller.—p. 481.

Oxygen Therapy for Blood Donors.—Rathmell says that for the past year a portable oxygen tank with an inhalation mask has been permanently assigned to the donor room at his hospital. It is used on any donor who shows loss of palpable wrist pulse or other signs of severe shock following blood donation. Oxygen is administered at the rate of 10 liters per minute through a rebreathing face mask. This therapy for two minutes, or longer, if indicated, brings about a rapid restoration of the donor's peripheral pulse, color, mental clarity, and sense of well-being.

New York State Journal of Medicine, New York

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Oklahoma State Medical Assn. J., Oklahoma City

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Plastic & Reconstructive Surgery, Baltimore

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*Mammaplasty: Analysis of 110 Consecutive Cases with End-Results. H. Conway.—p. 303.
Treatment of Developmental Malformations of the Jaws. J. M Converse and H. H. Shapiro.—p. 316.
Effect of Gestation on Experimental Skin Homografts. J. A. Valone. —p. 354.
Dermoid Cyst of Nose: Case Report. K. Somers.—p. 365.
Two Cases of Hemangioma of Tongue. C. Borchskan and S. Okten. —p. 368.

End Results of Mammaplasty.—Conway says that, although there have been many reports on the technique of mammaplasty, relatively little information is available about complications and end-results following operation. This presentation reports experience with 110 consecutive cases in which mammaplasty was done for micromastia, macromastia, or mastoptosis. The operations were done at the New York Hospital, where a conservative attitude has been advocated with regard to the indications for mammaplasty. Various techniques of transposition of mammary gland were applied in 22 cases of macromastia, with major complications in 6 cases and satisfactory results in only 12 cases. In 68 cases macromastia was treated by partial breast amputation with free composite nipple grafts. With this technique of operation there were no major complications. The nipple grafts were completely successful in 65 of these 68 cases, and the transplanted nipples regained sensation and erectility. The result of operation was satisfactory in all cases. Eight patients who became pregnant following free transplantation of nipples had no complications as a result of this technique of mammaplasty for macromastia.

Postgraduate Medicine, Minneapolis

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Malpractice and Its Prevention. L. J. Regan.—p. 387.
Management of Patients Suffering from Difficulty in Swallowing with Special Reference to Cardiospasm. P. P. Vinson.—p. 393.
Effect of Ductless Glands on Growth and Development. A. A. Werner. —p. 399.
Indications for Sympathectomy. J. L. Poppen.—p. 403.
Physiologic Aspects of Anorexia Nervosa. J. M. Berkman, C. A. Owen Jr. and T. B. Magath.—p. 407.
Trigeminal Neuralgia and Mandibular Joint Dysfunction. E. A. Smolik and E. J. Hempstead.—p. 419.
Reticuloendotheliosis. R. J. Blattner.—p. 427.
*Causalgia. F. H. Mayfield.—p. 436.
Ever-Continuing Search for Immunity in Tuberculosis. J. A. Myers. —p. 469.

Causalgia.—Causalgia is the term that Weir Mitchell applied to the burning pain observed in soldiers who had sustained nerve injuries. The condition is associated with profound trophic changes, which are believed to result from alterations in blood flow. It appears that the pathological mechanism is a transfer or shunt of impulses within the nerve at the site of injury. It can be relieved temporarily by procaine injection of the sympathetic chain and permanently by surgical removal of the appro-

priate portion of the sympathetic chain. Relief also follows when the nerve injury is of such degree that surgical excision of the injured segment is necessary. Many patients with causalgia of mild degree recover spontaneously, and one is justified in using repeated procaine injections of the sympathetic chain or drugs such as tetraethyl ammonium chloride (etamon®) and 2-benzyl-imidazoline (priscoline®) hydrochloride to block the sympathetic chain, so long as improvement follows, if the patient is not undergoing emotional deterioration or showing crippling ankylosis as the result of the pain. Procaine injection is essential in differential diagnosis between causalgia and hysterical post-traumatic vasomotor complexes.

Psychoanalytic Review, Albany, N. Y.

39:309-409 (Oct.) 1952. Partial Index

Masochism, Passivity and Radicalism. H. H. Hart.—p. 309.
Consideration of Psychic Mechanisms in Vasospastic Disorders of Hand. E. Lowenhaupt.—p. 329.

Public Health Reports, Washington, D. C.

67:1069-1160 (Nov.) 1952. Partial Index

Public Health and Clinical Laboratories in Diagnosis of Enteric Bacterial Infections. E. J. Tiffany.—p. 1069.
Meeting the Health Needs of the Child. H. C. Stuart.—p. 1076.
Progress in Water Pollution Control. C. E. Schwob and L. B. Dworsky. —p. 1080.
Local Public Health Officer in Great Britain Today. A. Daley.—p. 1096.
Reported Tuberculosis Morbidity: United States, 1949-1951. R. J. Anderson and H. I. Sauer.—p. 1101.
The Health Department and Poliomyelitis: Administrative Factors in 1952 Outbreak in Wayne and Medina Counties, Ohio. E. E. Kleinschmidt, M. Abbott and E. I. Kauffman.—p. 1109.
Psychological Impact of Cancer Surgery. A. Sutherland.—p. 1139.

Rhode Island Medical Journal, Providence

35:461-516 (Sept.) 1952

Place of the Plastic Surgeon in Medicine. B. Cannon.—p. 477.
Tibia Vara: Case Report. S. D. Simon.—p. 480.
Heart in Dystrophia Myotonica: Report of Three Cases in Single Family. H. Miller and D. W. Drew.—p. 483.

35:517-580 (Oct.) 1952

Electrolyte Balance and Fluid Therapy. W. T. Caraway.——p. 533.
Administrative Problems in Air Pollution Control in Providence. A. C. Daley.—p. 543.

Rocky Mountain Medical Journal, Denver

49:889-1002 (Nov.) 1952

Federal Thought Control, a Challenge to American Liberties and Freedom. V. M. Newton Jr.—p. 915.
Incoming President's Address. K. B. Castleton.—p. 922.
Congenital Cysts and Fistulae of Head and Neck. T. E. Beyer and J. R. Blair.—p. 927.
*Stevens-Johnson Syndrome (Variant of Erythema Multiforme Exudativum?) Treated with Aureomycin. G. J. Harmston.—p. 931.

Stevens-Johnson Syndrome.—What is now generally referred to as the Stevens-Johnson syndrome is an eruptive fever with stomatitis and ophthalmia. Many authors hold that this is simply a variant of erythema multiforme exudativum, while others maintain it is a separate disease with a specific course and prognosis. Most recent reports, however, stress the similarity of Stevens-Johnson disease, Behcet's disease, Reiter's disease and ectodermosis erosiva pluriorificialis with severe erythema multiforme exudativum, and group them as the ocular-mucous membrane syndrome. Two cases of the disease are described here, in both of which penicillin was ineffective but the patient recovered promptly after treatment with aureomycin. Until the advent of aureomycin, the course of the uncomplicated disease was uninfluenced by treatment. Aureomycin appears to be specific in this disease, and patients who have been treated with this antibiotic have made rapid, uneventful recoveries. The response to 2 to 3 gm. daily by mouth until all signs and symptoms subside seems to be adequate. In patients who are unable to take capsules, the intravenous route could be used. The rapid recovery in most cases of erythema multiforme exudativum as well as the rapid response in cases of so-called Stevens-Johnson syndrome to aureomycin is possibly another indication of their related etiology.

South Carolina Medical Assn. Journal, Florence

48:287-314 (Nov.) 1952

Role of Conduction Anesthesia in Diagnosis and Treatment of Disease. R. E. Edmonson.—p. 287.
Mechanisms of Acid Base Balance of Clinical Significance. L. C. Reid. —p. 289.
Hemochromatosis Complicated by Congestive Heart Failure and Severe Anemia: Report of Case. R. K. O'Cain and H. L. Smith.—p. 294.
Carcinoma of the Penis. K. M. Lynch Jr.—p. 298.

South Dakota J. Med. & Pharmacy, Sioux Falls

5:273-302 (Oct.) 1952

Obstructive Lesions of Upper Part of Respiratory Tract of Children. G. B. Logan.—p. 273.
Diabetes Detection Week. J. W. Donahoe.—p. 278.
Some Remarks on Diabetes Mellitus. J. L. Calene.—p. 279.
The Doctor and the American Medical Education Foundation. H. W. Jones.—p. 280.

5:303-328 (Nov.) 1952

Specific Streptococcal Antigen and Thermal Antibody in the Prevention, Diagnosis and Treatment of Epidemic Poliomyelitis. E. C. Rosenow. —p. 304.
Treatment of Children Having Asthma. G. B. Logan.—p. 311.
Responsibility of Medical Profession for Mental Health. R. E. Jernstrom. —p. 314.

Tennessee State Medical Assn. Journal, Nashville

45:423-466 (Nov.) 1952

Brief Review of Therapeutic Measures During Last 53 Years. J. T. Moore Sr.—p. 423.
Male Frog Pregnancy Test. S. S. Lambeth.—p. 428.
Growth of Specialized Programs for Tennessee Children. R. M. Foote. —p. 432.
Tumors of Salivary Gland Origin. J. C. Prose, R. R. Braund and E. W. Cocke Jr.—p. 437.

Texas State Journal of Medicine, Fort Worth

48:671-730 (Oct.) 1952

Stenotic Valvular Disease of Heart: Surgical Treatment. R. P. Glover. —p. 674.
Technique of Cardiac Catheterization. R. H. Skaggs and D. W. Chapman.—p. 685.
Artificial Femoral Head Replacement in Hip Joint Disorders. J. J. Hinchey and P. L. Day.—p. 689.
Brighter Outlook for Juvenile Diabetic Patient. C. W. Daeschner.—p. 694.
*Fluoridation of Public Water Supplies: Commentary. J. M. Coleman. —p. 698.
Psychosomatic Medicine as It Affects the Family Doctor. W. F. Cole. —p. 703.
Droop Shoulder Following Cervical Node Biopsy. R. A. Munslow and J. M. Capps.—p. 706.
Familial Polyposis of Colon. J. W. Harris and E. B. Hay.—p. 708.

Fluoridation of Water Supplies.—Use of fluorine in public water supplies for prevention of dental caries has been debated during recent years. This problem has arisen because of the advocacy of the addition of this element to the public water supplies by the United States Public Health Service and various state health departments. The policy has been established by the public health agencies that the addition of fluorine must have the approval of the local medical society, which therefore should be well grounded in the facts and should make recommendations only after impartial review of all evidence. To one trying to read objectively the report of the congressional hearing on fluoridation of public water supplies, it appears that the representatives of the public health field have developed considerable enthusiasm for a method of caries control that is relatively simple and for which, considering the benefits to be obtained in the reduction of dental caries of from 35 to 65%, the cost is not excessive. The work done so far has been directed largely toward proving the effectiveness of the method in the control of caries, and the efforts that have been made to determine the ill effects of this material have been restricted to small groups of children and to a test group of some five or six adults. The committee that held these hearings was not, in its final report, willing to endorse the fluoridation of water. Apparently enough doubt was expressed that it seemed desirable to perform further experimental work before universal endorsement is given.

FOREIGN

Archives des Maladies du Coeur, Paris

45:865-960 (Oct.) 1952. **Partial Index**

Cardiovascular Syndrome Associated with Mass Poisoning by Bread. G. Giraud and H. Latour.—p. 865.
*Surgical Creation of Arteriovenous Fistula in Treatment of Permanent Pronounced Arterial Hypertension. C. Lian and H. Welti.—p. 872.
Alpha Globulin in Febrile Heart Diseases. R. Raynaud, J. R. D'Eshougues, R. Bourgarel and others.—p. 881.
Ventricular Gradient in Congenital Heart Disease With Right Ventricular Hypertrophy. B. Concina and L. Marghieri.—p. 892.

Surgical Production of Arteriovenous Fistula in Hypertension.—An arteriovenous fistula was produced surgically in 17 selected patients with persistent arterial hypertension. All of the patients had diastolic pressure of 130 mm. Hg or more in recumbent position, but little or no cardiac or renal decompensation and satisfactory general condition. In seven patients a simple arteriovenous fistula was created between the superficial femoral artery and its accompanying vein; in some of these patients ligation of the femoral vein above the arteriovenous fistula was performed later because of the development or exacerbation of cardiac decompensation. In eight patients these two procedures were performed simultaneously. Because of the presence of varices in the lower extremities, the arteriovenous fistula was created in the axilla between the inferior scapular artery and the axillary vein in one patient, and between the axillary artery and axillary vein in another. Functional disturbances were diminished in all 17 patients. The systolic pressure was reduced by 30 mm. Hg on the average and the asystolic pressure by 20 mm. Hg. In three patients the preexisting cardiac decompensation was made worse, and in two it was improved. In three patients the preexisting cardiac decompensation remained unchanged. Nine patients did not have any cardiac decompensation before or after the surgical intervention. Femoral or axillary arteriovenous fistula combined with or rapidly followed by venous ligation thus may provide considerable relief for the patient with hypertension and may remove the danger of complications. Although a follow-up for several years seems to be required for definite conclusions, it may already be stated that this type of surgical intervention is indicated because the risk is small and there is a possibility of subsequently abolishing or minimizing the fistula.

Belgisch Tijdschrift voor Geneeskunde, Leuven

8:865-884 (Oct. 1) 1952. **Partial Index**

*Can Denervation of the Carotid Sinus Produce Hyperfunction of the Adrenal Cortex? J. Bekaert.—p. 878.
*Is Vitamin K an Antidote Against Bishydroxycoumarin (Dicoumarol®)? M. Verstraete.—p. 884.

Denervation of Carotid Sinus and Hyperfunction of Adrenals.—Since some investigators had ascertained that denervation of the carotid sinus causes hypertrophy of the adrenal cortex, Bekaert investigated the function of the adrenal cortex following denervation of the carotid sinus in dogs. He found that, after bilateral denervation of the carotid sinus as well as after simple exposure of this region, the eosinophil count in the blood showed a transitory reduction, which persisted for only a few days. Since the hyperfunction of the adrenal cortex that resulted from both these interventions was temporary, it was probably caused by the stress of the operation rather than by the denervation.

Is Vitamin K an Antidote Against Bishydroxycoumarin?—Continuous determinations of the prothrombin content of the blood are essential to guard against hemorrhages likely to result from the administration of bishydroxycoumarin (dicoumarol®). Once hemorrhage has started, blood transfusions and a vitamin K preparation are usually given. However, the practical value of various types of commercial vitamin K preparations has been questioned recently. Water-soluble vitamin K seems to exert little or no influence on hypoprothrombinemia induced by bishydroxycoumarin. The natural oil-soluble vitamin K_1 or its oxidized form, on the contrary, is capable of acting as an antidote against bishydroxycoumarin, and after suitable preparation it can be injected intravenously in doses of from 200 to 400 mg. Although this preparation was obtainable for a time, it has recently been almost completely replaced by the water-soluble vitamin K. The difference in the mode of action of these two types of vitamin K has not been completely explained as yet, but the author feels that as long as the natural oil-soluble vitamin K is not available, hemorrhage due to bishydroxycoumarin will be dangerous and may even cause fatal complications, particularly if the patient is not hospitalized.

British Journal of Experimental Pathology, London

33:419-512 (Oct.) 1952. **Partial Index**

Relation Between Distribution of Iron and Ascorbic Acid in the Body. J. A. Nissim.—p. 419.
In Vivo Observations of Effects of Cortisone Upon Blood Vessels in Rabbit Ear Chambers. N. Ashton and C. Cook.—p. 445.
Effects of Lipid Extraction on Properties of Immune Systems. E. S. Orlans.—p. 451.
Carbohydrate Metabolism and Cell Division in Developing Red Blood Cells. R. J. O'Connor.—p. 462.
Agglutination of Sensitised Red Cells by Antibody to Serum, with Special Reference to Non-Specific Reactions. J. R. Anderson.—p. 468.
Acute Pulmonary Oedema and Histamine. R. Jaques.—p. 484.
Development of Inclusion Bodies in Cells of Rat's Liver After Partial Hepatectomy. I. Doniach and K. Weinbren.—p. 499.
*Effect of Cortisone on Experimental Intraperitoneal Silicotic Nodules. F. R. Magarey and J. Gough.—p. 510.

Effect of Cortisone on Experimental Silicosis.—In a previous report Magarey and Gough demonstrated that cortisone in large doses reduces the formation of fibrous tissue provoked by finely powdered quartz (silicon dioxide) in the peritoneal cavity of rabbits. The experiments described in the present paper were undertaken to determine whether cortisone affects the fibrous connective tissue of established silicotic nodules. This problem assumes importance on two counts: First, cortisone is reported to have a beneficial effect on certain chronic conditions characterized by long-standing fibrosis such as scleroderma and keloid scarring. Second, there has been a report of clinical improvement in a case of pulmonary silicosis treated with corticotropin. In these experiments intraperitoneal silicotic nodules were established in six rabbits, after which half the rabbits received 20 mg. cortisone acetate daily for 22 to 84 days. At the end of this time the nodules in the control animals consisted of a central accumulation of quartz surrounded by a dense layer of compact collagen; outside this was a cellular fringe in which the presence of many fibroblasts suggested that active fibrosis was still progressing. In the cortisone-treated animals the nodules were similar, except that, instead of the cellular fringe, diffuse delicate connective tissue, consisting of loosely knit fibers and thin-walled blood vessels, surrounded the silicotic nodules. The authors were unable to detect any reduction of collagen in established intraperitoneal silicotic nodules. The absence of a cellular outer fringe in the nodules in cortisone-treated animals, however, suggests that during the administration of the cortisone further fibroblastic proliferation was retarded. This suggests that cortisone will not have any lasting beneficial effect on the collagen in human silicosis, although it might arrest progression of the lesions while it was being administered.

British Medical Journal, London

2:1007-1058 (Nov. 8) 1952

Future of Local Authority Health Services. A. L. Banks.—p. 1007.
Recent Advances in Active Immunization: (Diphtheria, Whooping-Cough, Tuberculosis). H. J. Parish.—p. 1010.
Four Cases of Obstruction at Duodeno-Jejunal Junction. F. A. R. Stammers.—p. 1013.
Management of Children with Primary Tuberculosis. F. J. W. Miller. —p. 1015.
Chemical Estimation of Cortisone-Like Hormones in Urine. C. L. Cope and B. Hurlock.—p. 1020.
17-Ketosteroid Excretion in Gout. W. R. Butt and F. G. W. Marson. —p. 1023.
*Acute Acetone Poisoning Caused by Setting Fluid for Immobilizing Casts. L. C. Harris and R. H. Jackson.—p. 1024.
Changes in Duodenal Content Following Carbachol. H. Wapshaw. —p. 1027.

Acetone Poisoning Caused by Setting Fluid for Casts.—Lightweight casts consisting of glass and textile bandages, which are set by means of a fluid consisting chiefly of acetone, are now used widely for the immobilization of extremities. They are

penetrable by x-rays and need not be removed for roentgen examination. Harris and Jackson relate the case of a 10-year-old boy in whom a hip spica bandage was applied because of tuberculous coxitis. About 72 oz. (2 liters) of 90% acetone setting fluid was used. The cast was applied in a room in which the heat ranged between 82 and 88 F. A similar plaster was applied to another boy while the first patient was still in the room. The second boy vomited once 28 hours after the cast was applied, but the first boy developed severe symptoms after a latent period of more than six hours. He became restless and shortly after began to vomit with gradually increasing frequency. Before 24 hours had elapsed the vomitus contained altered blood, and by this time he was stuporous, with Kussmaul or intermittent paroxysmal respiration. In such cases collapse may become profound, with the patient complaining of intense thirst. The smell of acetone in the breath may be striking, and acetone, diacetic acid, and sugar may be found in the urine. Recovery begins gradually late on the second day. The latent interval in the cases of acetone poisoning caused by the application of casts does not seem to occur in industrial acetone poisoning. Some persons sleep with their heads under the bedclothes, where the concentration of acetone produced by vapor from the drying cast is high, and this may at least partially explain the latent period. The possibility of absorption of acetone through the skin must also be considered. The author urges the following precautions to prevent acetone poisoning in applying immobilizing casts: As little of the setting fluid as possible should be used. This method should not be used for casts covering extensive areas of the body unless ventilation is ideal. Room temperatures should not be too high, as this would increase the amount of vaporization. A blower or exhaustion fan would increase the rate of drying. Patients and nurses should be warned of the possible ill effects of the patient's head being under the bedclothes.

Canadian Medical Association Journal, Montreal

67:395-504 (Nov.) 1952. Partial Index

Fungous Infections of Skin, Hair and Nails. J. B. Fischer and N. M. Wrong.—p. 398.
Complications of Gastrointestinal Intubation. A. D. McKenzie, J. R. Moore and G. G. Miller.—p. 403.
Newer Agents and Methods for Obstetrical Anaesthesia. G. Ellison. —p. 406.
Management of Acne Vulgaris in Private Practice. F. Kalz, H. Prichard, C. Fournier and A. Janauskas.—p. 409.
Some Observations on Haemoglobin Levels of an Indian Population. J. Millar.—p. 414.
*Acrodynia Treated with 2-Benzyl-Imidazoline Hydrochloride. A. E. Gillespie.—p. 418.
Controlled Hypotension in Surgery. E. Asquith.—p. 421.
Laryngeal Papillomata in Children. D. S. Gorrell.—p. 425.
Metabolic Effects of Administration of Growth Hormone to Pancreatectomized Individual. H. W. McIntosh and E. P. Carruthers.—p. 428.
Bronchogenic Carcinoma. A. J. Blanchard and R. W. Bell-Irving.—p. 431.
Febrile Reactions to Para-Amino-Salicylic Acid (PAS). J. C. C. Yeh. —p. 435.
Association of Chronic Pulmonary Emphysema with Chronic Peptic Ulceration. P. T. Green and J. C. Dundee.—p. 438.
Adenolymphoma. L. G. Hampson and E. A. MacNaughton.—p. 442.
Sanatorium Treatment of Tuberculous Patients in Ontario. C. A. Wicks. —p. 446.
Pancreatic Heterotopia. A. Gaum and C. Riley.—p. 450.
Accreditation of General Practitioners. W. V. Johnston.—p. 452.
Pulmonary Volumina and Ventilation Studies in Chronic Bronchitis. I. Karrel and R. Place.—p. 458.
*Cortisone Acetate in Treatment of Acute Phosphorus Poisoning. J. R. D. Bayne, J. C. Beck, L. Lowenstein and J. S. L. Browne.—p. 465.

Acrodynia.—The occurrence of severe acrodynia is reported in a 26-month-old white boy. The symptoms included insidious change in personality and protean skin rashes of three months' duration and paresis, anorexia and insomnia of three weeks' duration. The patient had previously been a happy, healthy, active child. At the age of 23 months a skin lesion had developed on his chin, which was treated with ½ oz. (15 cc.) of 2% ammoniated mercury ointment. Somewhat similar lesions including ulcerations, impetiginous scabs, erythematous blotches, urticarial wheals, and sudaminal eruptions appeared elsewhere and covered most of his skin surface over the course of several weeks; treatment with a 3% ammoniated mercury ointment and with other ointments was of little benefit. After the first week in hospital he was given a 10 day course of dimercaprol (BAL). After four days of this therapy the patient's condition remained unchanged and 2-benzyl-2-imidazoline (priscoline®) hydrochloride was administered orally in doses of 12.5 mg. every six hours. This resulted in immediate symptomatic relief. To maintain symptomatic relief the dose of the drug had to be increased to 25 mg. given every two hours. The pulse rate decreased from 180 per minute to 120 per minute, and the blood pressure dropped from 230/180 mm. Hg to 130/90 mm. Hg. Priscoline® therapy was discontinued, but within 24 hours the previous distressing symptoms recurred. Priscoline® therapy was reinstituted in oral doses of 25 mg. every two hours. After one month of treatment the dose of the drug was reduced to 25 mg. every four to six hours during the day and by the end of the second month treatment was discontinued. The patient has remained asymptomatic since. It is suggested that the cause of acrodynia in this case was hypersensitivity to mercury. The administration of dimercaprol (BAL) may have increased the rate of excretion of mercury and so reduced the "natural" duration of the disease. The distressing symptoms of acrodynia were due to dysfunction of the sympathetic nervous system in the susceptible child. The persistent administration of priscoline® blocked these distressing sympathomimetic effects throughout the duration of the disease. In such cases therapy should not be discontinued until the maximal tolerated dose has been reached.

Cortisone in Acute Phosphorus Poisoning.—In an attempted suicide, a 29-year-old woman ingested the contents of a 4 oz. (120 cc.) tube of rat poison containing 825 mg. of yellow phosphorus, approximately 14 times the minimal lethal dose. She developed severe symptoms and signs of phosphorus poisoning, and by the fourth day cortisone administration was considered because of the apparently grave prognosis. An initial dose of 200 mg. of cortisone acetate suspended in isotonic sodium chloride solution was given by mouth, but because the patient vomited shortly afterward, the dose was repeated intramuscularly, and administration of the drug was continued in doses of 50 mg. every six hours for eight days. Within 48 hours the patient appeared greatly improved. On the eighth day of cortisone therapy the dose was reduced to 25 mg. every six hours. The patient was discharged 40 days after her admission, but treatment with 100 mg. of cortisone daily in four divided doses was continued at home in the hope of reducing the amount of postnecrotic scarring of the liver. The cortisone therapy was gradually reduced and finally discontinued 65 days after the initial episode. The patient has remained well for 10 months.

Deutsche medizinische Wochenschrift, Stuttgart

77:1341-1372 (Oct. 31) 1952. Partial Index

Prophylaxis and Therapy of Sequels of Poliomyelitis. L. Kreuz.—p. 1341.
*Treatment of Pulmonary Edema by Novocain Block of Stellate Ganglion on the Right Side. A. Pierach and K. Stotz.—p. 1344.
*Treatment of Pneumococcic Meningitis in Infants and Children. U. K. Petersen.—p. 1346.
Problems in Estimating Blood Iodine Content. E. Klein.—p. 1353.
Incidence of Syphilis During Pregnancy. R. Wohlrab, W. Joest and W. Hopken.—p. 1357.

Block of Right Stellate Ganglion in Pulmonary Edema.—Pierach and Stotz in 1950 described a case in which blocking of the right stellate ganglion promptly counteracted pulmonary edema. Commenting on the rationale of this procedure, they point out that the increased permeability of the alveolar epithelium and the acute pressure increase in the pulmonary circulation that give rise to pulmonary edema can be brought on either chiefly (although never exclusively) by hemodynamic factors or in other cases chiefly by changes in the central nervous system. Particularly in the latter cases the sympathetic innervation plays an important role. Following the first surprising success with right stellate ganglion block in the case already mentioned, the authors used this treatment in seven other cases of pulmonary edema. Observations in these cases proved that, even in apparently hopeless cases of pulmonary edema, blocking the right stellate ganglion with procaine hydrochloride may effect a prompt improvement by shifting the autonomic innervation of the pulmonary circulation toward the vagotonic side. On the other hand, stellate ganglion block on the left side has been known to produce pulmonary edema, because exclusion of this ganglion,

paradoxically produces manifestations of sympathicotonia. The authors feel that blocking of the stellate ganglion, but always only on the right side, should be used oftener in the treatment of pulmonary edema. Complete mastery of the technique and a preliminary test for hypersensitivity to procaine hydrochloride are essential for the success of this treatment.

Treatment of Pneumococcic Meningitis in Infants and Children.—Petersen evaluates different methods used by himself and others for the treatment of pneumococcic meningitis. With the combined administration of penicillin and the sulfonamides, the mortality is still about 25%. Furthermore, relapses are frequent with this therapy. Aureomycin has proved effective in the treatment of relapses, and has been used successfully by the author in combination with penicillin in the treatment of the initial attack of the disease. Recently he has discontinued the intrathecal use of penicillin, which he formerly regarded as important. He gives aureomycin orally in doses of 50 mg. per kilogram of body weight per day. This is given in six doses of 62.5 mg. each or four doses of 125 mg. in a juice at mealtime. If swallowing proves difficult, the aureomycin is given by stomach tube. Penicillin is given intramuscularly in doses of 50,000 units every three hours. Administration of aureomycin is usually discontinued after two weeks. Vitamin B is added to the food if aureomycin therapy has to be prolonged. The author feels that evaluation and comparisons of therapeutic methods will require several years.

East African Medical Journal, Nairobi

29:297-338 (Aug.) 1952. **Partial Index**

Observations on Control of Sleeping Sickness Among the Azande of Southern Sudan. P. H. Abbott.—p. 297.
Blindness in Uganda. A. J. Boase.—p. 311.
*Case of Optic Neuritis in a Qat Addict. D. A. Baird.—p. 325.

Optic Neuritis in a Qat Addict.—While the literature contains numerous reports about poisoning with qat (Catha edulis), Baird could find no record of optic neuritis having been caused by this shrub, the leaves of which act as a narcotic stimulant when they are chewed or used as a tea. The case described here was discovered when a group of school boys were given vision tests in a school in the Somaliland Protectorate. One boy exhibited considerable visual disability not to be accounted for by any refractive error. He was an Arab, 17 years of age. For about 24 or 30 months his vision had been "misty" or, as he put it, when trying to read a book he had the impression that he was "looking through a cloud." He was a rather thin, spare individual, heavy-eyed and having a look associated with the qat addiction. The pupillary reaction to light was present but sluggish. Retinoscopy revealed that both optic disks were congested and edematous so that there was no clear-cut margin to the disk itself. It had been determined that the boy belonged to a family known as qat addicts. The father admitted that he himself had not been able to see very well, and retinoscopy revealed changes almost identical to those seen in the son. Father and son were both addicted to qat chewing. When the son was deprived of qat for some time, his visual acuity improved.

Hoja Tisiológica, Montevideo

12:239-340 (Sept.) 1952. **Partial Index**

Organization of Systematic Roentgen Examination of Communities and Its Value in Antituberculous Campaign. F. D. Gómez.—p. 239.
*Treatment and Prognosis of Minimal Pulmonary Tuberculous Lesions. A. Sarno, A. Artagaveytia, A. Trenchi and S. Curbelo de Malet. —p. 271.
Evolution of Tuberculous Tracheobronchitis: Observation of 150 Cases for 10 Consecutive Years. J. C. Dighiero.—p. 299.

Treatment and Prognosis of Minimal Pulmonary Tuberculous Lesions.—Clinical and roentgen observations for an average of six years were made on 364 patients with minimal pulmonary tuberculosis. The majority of the patients were between the ages of 16 and 30 years. Most of them were observed in the preantibiotic era. Treatment was ambulatory unless the lesions showed progression, in which case the patients were hospitalized. At the time of the first examination, 92 patients (25.2%) showed symptoms of the disease and 272 (74.8%) did not. The lesion was roentgenologically observed in the apicosubclavicular area in 315 cases (86.5%) and in other zones of the lung in 49 cases (13.4%). It was predominantly exudative in 243 cases (66.8%) and predominantly productive in 121 cases (33.2%). Treatment varied with the clinical form and the roentgenological appearance of the lesion. It included rest and hygienic diet. The best results were obtained with artificial pneumothorax or with a combination of streptomycin and *p*-aminosalicylic acid. Of 121 patients who had artificial pneumothorax, 105 (86.7%) were cured, 8 (6.61%) showed progression of their lesions, and 8 showed moderate improvement or no change. Of 33 patients who received streptomycin and *p*-aminosalicylic acid, 15 (45.4%) were cured, 10 (30.3%) showed progression of their lesions, and 8 were moderately improved or did not change. Recurrence of the lesion within the first year after treatment occurred in 151 patients (41.5%) in the entire series. It was more frequent in exudative lesions than in productive lesions. Of 237 patients with predominantly exudative lesions, 174 (71.6%) were improved, and 55 (22.6%) were unimproved, and 8 (6.18%) died. The authors conclude that minimal pulmonary tuberculosis without symptoms is frequent. Roentgen examination of the chest, in large groups of persons, especially in young adults, and periodical roentgen examinations are indicated in prevention of pulmonary tuberculosis. The prognosis of minimal pulmonary tuberculosis is poor unless the lesion is controlled early. In untreated patients the lesion has a great tendency to advance and in treated patients it has a tendency to recur. Advance of the lesion and recurrences are controllable by proper treatment.

Lancet, London

2:839-894 (Nov. 1) 1952

The Individual and the Group in Modern Medicine. R. J. V. Pulvertaft. —p. 839.
*Isoniazid in Pulmonary Tuberculosis: Its Use With and Without Streptomycin. C. L. Joiner, K. S. MacLean, E. K. Pritchard and others. —p. 843.
Isoniazid in Control of Experimental Corneal Tuberculosis. R. Goulding and J. M. Robson.—p. 849.
*In-Vitro Action of Isoniazid on Mycobacterium Tuberculosis. R. Knox, M. B. King and R. C. Woodroffe.—p. 854.
Titration of Strains of Tubercle Bacilli Against Isoniazid. D. A. Mitchison.—p. 858.
Correct Physiological Basis on Which to Compare Infant and Adult Renal Function. R. A. McCance and E. M. Widdowson.—p. 860.
Multilocular Cystic Tumour or Adamantinoma of Jaw. E. D. D. Davis. —p. 862.
Plasma-Esterase and Plasma-Lipase Levels in Nutritional Oedema Syndrome (Kwashiorkor). P. R. Srinivasan and V. N. Patwardhan.—p. 864.

Isoniazid in Pulmonary Tuberculosis.—At Guy's Hospital in London a preliminary comparison was made between the effects of isoniazid and identical capsules containing lactose on patients with tuberculosis. Twenty-four patients were selected and carefully paired in terms of age and duration, degree, and progression of disease. One of each pair received isoniazid (250 mg. daily in five 50 mg. capsules, one after each meal and two at bedtime, for six weeks) and the other the lactose capsules in the same way. Two patients did not complete treatment, and both were subsequently found to have been receiving lactose. A clear difference was seen in the progress of the two groups. The sputum from the patients in the treated group showed striking naked-eye and microscopic changes; no such changes were seen in the control group. It seemed important to investigate next whether this favorable effect continued during longer periods of treatment and whether the drug was most effective alone or in combination with streptomycin. Accordingly, after the preliminary six weeks the patients who had so far served as controls, together with one additional patient, were given isoniazid in the same way, and also 1 mg. of streptomycin six days a week intramuscularly. The results obtained during the first 18 weeks of treatment in each group were compared. It was found that isoniazid alone has a beneficial effect on certain cases of pulmonary tuberculosis in the first three to six weeks of treatment. In the next few weeks the initial improvement is no longer maintained, and soon deterioration ensues, which is associated with excretion of resistant strains of tubercle bacilli in the sputum. Combined therapy with isoniazid and streptomycin, on the other hand, gives a completely different picture when continued for a long enough period. There is the same initial improvement as in the patients treated with isoniazid alone, but the improvement

is maintained until at the end of 18 weeks there is a great difference between the two groups. The initial rapid improvement in the sputum counts, the gain in weight, and the fall in the erythrocyte sedimentation rate all continue, and there is paralleled improvement in the clinical condition. These results suggest that the haphazard use of isoniazid alone in treatment of chronic pulmonary tuberculosis must be strongly condemned. There is a grave risk that the final condition of patients treated with isoniazid alone may be worse than their original condition and that they will transmit isoniazid-resistant organisms to others.

In Vitro Action of Isoniazid on Tubercle Bacilli.—Studies conducted at Guy's Hospital in London confirm the observations of American investigators that isoniazid has a powerful and specific inhibitory effect on Mycobacterium tuberculosis and emphasize a number of other findings, which apparently have not been reported before. They found that although in Dubos liquid medium the growth of Myco. tuberculosis H37RV and of many strains freshly isolated from patients was inhibited initially by as little as 0.01 μg of isoniazid per milliliter, inhibition occurred only with higher concentrations after a longer period of incubation at 35 C or 37 C. This shift in end-point is due to (1) inactivation of the drug, which occurs even in uninoculated Dubos medium at 37 C, though in distilled water the drug is stable at that temperature and withstands autoclaving, and (2) the emergence of resistant organisms. The speed of inactivation of isoniazid in uninoculated Dubos medium varies directly with the temperature of incubation, although paradoxically, the shift in the sensitivity end-point seen at 35 C and 37 C is not observed at 40 C. Streptomycin or *p*-aminosalicylic acid has the same effect as increase of temperature in delaying the shift in the end-point; yet streptomycin does not prevent the inactivation of isoniazid in uninoculated Dubos medium. It seems likely that both increase of temperature and drugs such as streptomycin or *p*-aminosalicylic acid convert a predominantly bacteriostatic action of isoniazid into a more nearly bactericidal action. Isoniazid-resistant strains have been isolated in vitro, though the degree of resistance is not so great as that obtained eventually with streptomycin. Isoniazid-resistant strains retained their original sensitivity to streptomycin, and vice versa.

Minerva Medica, Turin

43:413-442 (Sept. 17) 1952. **Partial Index**

Anatomic and Radiological Study of Silicosis. B. Bellion and G. Ricco. —p. 413.
Roentgen Therapy of Inferior Cervical Spondylarthritis. G. Balestra. —p. 416.
Study on Heparinemia of Woman. G. Agolini and C. Confalonieri. —p. 421.
*Action of Fuchsin on Systemic and Local Traumatic Shock. E. Boschi and A. Gaspari.—p. 422.

Fuchsin in Traumatic Shock.—Fuchsin in doses of 60 to 200 mg. was given intravenously, intramuscularly, and in a few instances orally, to two groups of patients with trauma to the extremities. In the first group were those with the severest lesions in whom shock was already present. Except for 500 cc. of plasma given to two patients, no other systemic therapy was used. Shock disappeared quickly. The drug had a favorable effect on the lesions, and edema, paresthesia, cyanosis, and asphyxia did not occur. The capillary fragility, measured before and after the treatment with Angelini's petechiometer, returned to normal. In the second group were 48 patients with less severe unilateral or multiple injury to the extremities, mainly fractures and dislocations. A closed reduction followed by application of plaster was possible in almost all cases. Edema was transitory, the function of the joints was restored quickly, and cicatrization of the wounds and formation of bone callus were enhanced. The prophylactic action of the drug prevented the onset of secondary shock. Fuchsin had a favorable effect on the local lesions by preventing necrosis or circumscribing or resolving it when it was already present. The authors' experimental studies on rabbits confirmed the efficacious prophylactic and therapeutic action of fuchsin on general and local traumatic shock.

Münchener medizinische Wochenschrift, Munich

94:2209-2256 (Oct. 31) 1952. **Partial Index**

Nil Nocere! Difficulties of Dosage in Treatment With Cardiac Glycosides. R. Aschenbrenner.—p. 2209.
Practical Experiences with Anesthesia Produced by Isopropylchloride (IPC). P. Kluger.—p. 2215.
Chronic Cystitis as Manifestation of Gynecologic Diseases. H. Kremling. —p. 2217.
What are the Suppositions in Shortening the Isolation Requirements in Scarlet Fever Treated with Penicillin? C. A. Blömer and P. Schweier. —p. 2219.
*Chlorophyll as Deodorant in Otorhinolaryngology. K. Becker.—p. 2225.

Chlorophyll as Deodorant in Otorhinolaryngology.—The deodorizing effect of chlorophyll derivatives was tested at the otorhinolaryngological clinic of the university in Kiel. The substance was given orally in tablets of 0.1 gm. and 0.05 gm. or in powder form. The dosage varied with the individual patient and the cause and degree of the fetor. As a rule, one to two 0.1 gm. tablets were given one to three times daily. In cases of halitosis associated with carcinoma of the tonsils or with aphthous stomatitis, objective deodorization was obtained after ingestion of the second 0.1 gm. tablet; this deodorizing effect could be maintained by continued administration of one tablet three times daily. In less severe conditions of the tonsils or the teeth, satisfactory results were obtained with one 0.05 gm. tablet given three times daily. Two 0.1 gm. tablets three times daily were required to suppress the offensiveness of the breath in a patient with massive penetrating tonsillar abscesses. Nasal fetor was reduced significantly by oral administration of 0.1 gm. three times daily in a patient with syphilitic ozena. Similar observations were made in patients with temporary halitosis after surgical intervention on accessory nasal cavities or tonsillectomy, or during prolonged tamponade of the nose or accessory cavities. A viscous suspension of pulverized pure chlorophyll was employed for the filling of the maxillary sinuses in patients with fetid suppuration of the accessory nasal cavities. After the first filling the fetor disappeared from the secretion of the nasal cavity. Local application of chlorophyll preparations were less effective in cases of ill-smelling tissue or cartilage necrosis. Single doses of 0.5 to 1 gm. of chlorophyll were required to obtain a deodorizing effect in persons with tobacco and alcohol breath. The mechanism of this deodorizing effect has not yet been established.

Ugeskrift for Laeger, Copenhagen

114:1313-1356 (Sept. 25) 1952

*Frontal Lobotomy in Mental Disorders: Follow-Up Examination of 161 Patients Treated with Orbitomedial Frontal Undercutting. E. Busch, O. Halmsted, O. Lund and others.—p. 1313.
Surgical Aspects of Jaundice. J. M. Wollesen.—p. 1326.

Frontal Lobotomy in Mental Disorders.—Busch and his associates report three operative deaths, or an operative mortality of 0.75% among the first 400 psychotic patients treated with orbitomedial frontal undercutting. Among the first 161 patients operated on there were two operative deaths, four deaths not attributed to the intervention, and three patients who had previously been treated by the Freeman-Watts technique. Of the remaining 154 patients (41 men and 113 women) observed for from one to three years, 9 were apparently cured, 40 showed marked improvement, 40 were significantly improved, 8 who were improved subsequently received electroshock therapy, 64 were unchanged, and 1 patient was worse. In 24 cases, or 16%, epileptic seizures occurred for the first time postoperatively; in most cases the convulsions were few and easily controlled. Postoperative convulsions were twice as frequent in cases of mental disorders over 10 years' standing as in those with shorter preoperative course. The special tendency to convulsions noted in male schizophrenics is unexplained. The results attained by orbitomedial frontal undercutting seem to the authors to be at least as good as those attained by the more extensive forms of lobotomy. Marked improvement after the operation was more frequent in patients with shorter duration of the disease. Whether there are fewer psychic defects after orbitomedial frontal undercutting is not yet known.

BOOK REVIEWS

Principles and Practice of Anesthesiology. By Vincent J. Collins, M.D., Director of Department of Anesthesiology at St. Vincent's Hospital of City of New York. Cloth. $10. Pp. 528, with 99 illustrations. Lea & Febiger, 600 S. Washington Sq., Philadelphia 6, 1952.

This comprehensive textbook was prepared for the use of undergraduates in medicine, graduate students in anesthesiology, and as a source of reference for practicing anesthesiologists. The author's experience in providing instruction in both military and civilian practice has equipped him for the preparation of such a volume. Since true progress in anesthesiology is based on a reduction in morbidity and mortality, the author is to be congratulated on his emphasis on the individualization of each surgical case, with the selection of anesthetic technique and agent based on physiological and pharmacological considerations. This volume is divided into six sections that deal with general considerations, regional techniques, pharmacological considerations, complications, special considerations, and intravenous and inhalation therapy. There are 64 brief chapters that are well illustrated. A bibliography for helpful reference is included at the end of nearly every chapter, and a satisfactory index is provided.

Since the bibliography is such a valuable part of this volume, it is suggested that the second edition contain reference to other outstanding pioneers and their fundamental investigative contributions. Revision of this text should include elimination of distracting reiteration. Consideration should be given to changing the structure of several sentences in order to achieve grammatical correctness and clarity of thought. Unexpected capitalization of certain words in the body of the text is confusing, as are certain abbreviations. Numerous typographical errors are to be found, such as misspellings (sthenicity, guaze, tribomethomal, Hirshcfelder), omitted and incomplete references, duplicated words and sentences, and mislabeled figures.

The author's emphasis on the fact that anesthesia is primarily for the patient rather than for the operation is timely. He is to be commended on his brave statement that all too frequently the operating room management of certain patients reveals a lack of common sense and physiological comprehension of the situation. His text is a noteworthy attempt to correct this fault. This volume should have frequent revisions in order to keep it abreast of changing facts and experiences and to achieve greater accuracy and effectiveness. It is a valuable addition to the armamentarium of both medical students and physicians concerned with anesthesiology.

Disorders in Perception, with Particular Reference to the Phenomena of Extinction and Displacement. By Morris B. Bender, M.D., Professor of Clinical Neurology, New York University College of Medicine, New York. Publication number 120, American Lecture Series, monograph in American Lectures in Neurology. Edited by Charles D. Aring, M.D. Cloth. $3. Pp. 109, with 5 illustrations. Charles C Thomas, Publisher, 301-327 E. Lawrence Ave., Springfield, Ill.; Blackwell Scientific Publications, Ltd., 49 Broad St., Oxford, England; Ryerson Press, 299 Queen St., W., Toronto, 2B, 1952.

Disorders in perception studied by the author were those revealed by the simultaneous application of two distinct sensory stimuli. He especially studied the cases in which a stimulus applied to some abnormal area of the skin or of the retina escaped attention when, and only when, another stimulus was applied to a normal area at the same time. Original experiments, significant case histories, a bibliography, and an index make the book valuable. The histories illustrate the fact that an area that appears to have normal sensation when examined by means of single stimulus may prove to be quite abnormal when examined by the method of paired stimuli. The author therefore urges the adoption of this latter method as an essential part of neurological diagnostic procedure. The book is recommended to everyone interested in diseases of the nervous system.

The reviews here published have been prepared by competent authorities and do not represent the opinions of any official bodies unless specifically stated.

History of the Second World War: United Kingdom Medical Series. Editor-in-Chief: Sir Arthur S. MacNalty, K.C.B., M.D., F.R.C.P. Medicine and Pathology. Edited by V. Zachary Cope, B.A., M.D., M.S. With general preface to series by Sir Arthur S. MacNalty. Cloth. $11; 50s. Pp. 565. Her Majesty's Stationery Office, Box 569, London, S.E.1; [John Wright & Sons, Ltd., 42-44 Triangle West, Bristol 8, England]; American agents, British Information Service, 30 Rockefeller Plaza, New York 20, 1952.

This is the first of two clinical volumes on the medical history of World War II in the British Empire. Each chapter is signed by the writer, or writers, who prepared the various reports. In no previous war have the medical services been so efficient. Excellent organization and better transportation played a large part in the improvement, as did advances in therapeutics and in methods of surgical treatment. How the various medical problems were met and how the new knowledge was applied are told in part in this clinical volume. There are chapters on infectious hepatitis, cerebrospinal fever, chronic rheumatism, acute rheumatism, smallpox, encephalitis, tetanus, tuberculosis, nutritional disorders, gonorrhea and syphilis, medicine in the Army, the Royal Air Force, and the Royal Navy, psychiatry, dermatological practice and pediatrics in wartime, diphtheria, food poisoning, primary atypical pneumonia, hematology, penicillin, and dyspepsia. Obviously these subjects are too numerous and comprehensive to receive individual analysis in a brief book review. Great progress was made in the prevention and treatment of many of these diseases, and, in others, there has been little progress to report.

This volume will be of great value as a reference book and of interest to many seeking knowledge about the preservation of health in wartime. The second World War was unprecedented in that it affected the civil population in many countries much more than wars had in the past. Thus it created problems that never before had been seen on so extensive a scale. It is necessary that a permanent record be made of these great events to inform future generations.

Problems of Aging: Transactions of the Fourteenth Conference, September 7-8, 1951, St. Louis, Mo. Edited by Nathan W. Shock, Chief, Section on Gerontology, National Heart Institute, Bethesda, Md. Cloth. $3. Pp. 138, with 9 illustrations. Josiah Macy, Jr., Foundation, 565 Park Ave., New York 21, 1952.

This is a report of the Transactions of the Fourteenth Conference on Problems of Aging under the sponsorship of the Josiah Macy, Jr., Foundation. It constitutes another noteworthy contribution by the foundation to an exceedingly important though generally unexplored field. The participants in the conference have such a varied background and experience that their opinions afford fertile ground for further study. It would be difficult to assess the value of the areas covered in relation to each other, because those on biology and medicine and sociology, psychology, education, and religion are concerned in general with the abstruse, while those on economics, employment, and welfare and medical services, hygiene, and housing are based mostly on factual data. Naturally, the discussions contain many controversial opinions, which must be expected when persons with totally different backgrounds, nationalities, and cultural and scientific training get together.

From a practical standpoint it must be conceded that there will probably never be universal approval of attempts to prolong the life of the aged who have become relatively unfit. Such attempts would proportionately jeopardize the survival of the more fit and would weaken their efforts to maintain adequacy as long as possible. One cannot escape the conviction that dependent old age is a tragedy to the survivor as well as to his family and society. While continued investigations of the process of aging should be encouraged, a dissipation of energy in such investigations might be avoided if the Prayer of Moses is kept in mind: "The days of our years are threescore and ten; and if by reason of strength they be fourscore years, yet is their strength labour and sorrow; for it is soon cut off, and we fly away" (Psalm 90, 10th verse).

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The Range of Human Capacities. By David Wechsler, Ph.D., Chief Psychologist, Psychiatric Division, Bellevue Hospital, New York City. Second edition. Cloth. $4. Pp. 190, with 13 illustrations. Williams & Wilkins Company, Mount Royal and Guilford Aves., Baltimore 2, 1952.

This book considers the measurable aspects of human structure and performance, and it is especially concerned with the extent of such differences as those between the largest and the smallest and the strongest and the weakest by the various criteria used. The author considers, in addition to the usual anthropometric data, such things as athletic performance, output in various occupations, effects of age, and the chances of survival. He has the usual difficulty in defining the word "normal" and in deciding what to do with the extreme deviants at either end of a distribution. He decides "to call abnormal all individuals who, with respect to any given trait or ability, fall within the lowest and highest tenths of one per cent of the population," so that if 1,000 persons are lined up, say in order of height, the first and the thousandth person will be rejected as abnormal and the range from the second to the 999th will be called the normal range of variability.

No doubt the author is entitled to use the phrase in this arbitrary way, and the explicit definition can be relied on to prevent misunderstandings. But few statisticians are likely to be convinced by his arguments (pages 46 and 47) in defense of this procedure, and it leads to the suspicion that much of the author's reasoning, especially that which would attach a special biological significance to the transcendental number e=2.7182 . . ., may be a *petitio principii*. It is also hard to understand why circumferences, which are directly proportional to other linear dimensions of a body, should form a distinct category in the list on page 52. The author's interpretation of his findings on this point, as summarized in the diagram on page 54, is one of the weakest features of his work. The references listed in the bibliography also raise doubt as to the author's familiarity with important work on factorial analysis published since 1935. The book can be recommended as a provocative, but certainly not definitive, contribution to biometry.

Die Chirurgie des Dickdarms. Von Professor Dr. Hans Finsterer. Band VII, Wiener Beiträge zur Chirurgie, herausgegeben von Professor Dr. Rudolf Demel. Cloth. $12.50. Pp. 382, with 19 illustrations. Wilhelm Maudrich, Spitalgasse 1B, Wien IX/2, 1952.

This new work on the colon is assured a warm welcome by surgeons throughout the scientific world. The competence of its distinguished author, who is professor of surgery at the University of Vienna, expresses itself in an essential scholarship, insight, and a wide grasp of the problems of management in colon surgery. The author has termed his work a monograph, which is consistent with its length and concise treatment. Not aiming at encyclopedic completeness, he has chosen to emphasize the clinical approach and the symptomatology and diagnosis and to omit detailed descriptions of surgical procedures. Illustrations are accordingly reduced to a minimum of drawings, roentgenograms, and histological material. Many will agree that the author has thus chosen the most effective form for reporting his own conclusions from a lifetime devoted to abdominal surgery.

In another respect, however, the offering is somewhat more comprehensive than monographic. The practicing surgeon will recognize in it a valuable outline of surgical treatment, presenting in order the various types of operations, lesions, and diseases of the entire colon, from the appendix to the sigmoid flexure. Here, one finds a discussion of surgical indications, rationale, results, and prognosis, in which the author has drawn liberally from personal experience to interpret and enrich his presentation of modern developments. The early chapters discuss the various types of operation, with the indications for each. Separate chapters are given to enterostomies (including cecostomies, ileostomies, and colostomies), enteroanastomoses, exclusions, resections, and total colectomy. Of particular interest is the discussion of the various types of anastomosis, including terminoterminal, laterolateral and terminolateral, aseptic anastomosis, and plastic surgery of the ileum, colon, and rectum. Subsequent chapters deal with occlusions, wounds, fistulas, inflammations, and diverticuloses.

Diseases of the colon are discussed in the final chapters. Included here are the treatment of tuberculosis, syphilis, lymphogranulosis, actinomycosis, pseudo and benign tumors, and finally the malignant varieties, carcinoma and sarcoma. The surgery of carcinoma is given perhaps the fullest discussion, with numerous case reports and an evaluation of the results in the author's clinics. As here reported, the total mortality in 248 interventions was 19.3%. Of these, cancers of the ascending colon resulted in 17 deaths among 89 patients operated on once (19.1%). Cancers of the descending colon resulted in 5 deaths among 50 patients operated on once, 3 deaths among 12 operated on twice, and 11 deaths in 69 operated on three times (15.9%). Atypical resections in 28 cases resulted in 12 deaths. An excellent bibliography documents the case histories and also presents a valuable selection of the literature from earlier investigations to very recent ones.

Cardiac Therapy. By Harold J. Stewart, M.D., Associate Professor of Medicine, Cornell University Medical College, New York. Cloth. $10. Pp. 622, with 68 illustrations. Paul B. Hoeber, Inc. (medical book department of Harper & Brothers), 49 E. 33rd St., New York 16, 1952.

So much has been accomplished in the field of cardiology in the past 25 years that a textbook on diseases of the heart cannot contain the details of therapy that the practicing physician would like to have; therefore, this book on cardiac therapy is indeed welcome. The author has had many years of teaching experience at Cornell University Medical College and practice at New York Hospital. He has also contributed many articles in the field of cardiac therapy to the medical literature and is well recognized as an authority on the subject. As the book is written entirely by Dr. Stewart, it reflects his personal experiences with the methods of treatment discussed. This is most desirable in a textbook on treatment.

To furnish a proper background for therapy, Dr. Stewart included a short presentation on diagnosis in each section. Also, when required, as in the section on congestive heart failure, the physiological concepts that form the rational basis for therapy are reviewed. The many problems concerned with the treatment of congestive heart failure are adequately dealt with in the first section of the book.

Separate chapters describe the special forms of therapy needed in the major etiological types of heart disease, such as hypertension, rheumatic fever, syphilis, and arteriosclerosis. The controversial question of anticoagulant therapy is expertly handled. Surgical procedures at present available for cardiac conditions are evaluated, and indications for each procedure are given. A very important aspect of treatment not usually discussed in a textbook of therapy is given a full chapter entitled "What to Tell Patients About Their Heart Disease."

The book is entirely up-to-date. It is obvious that revisions must have been made right up to press time, because several forms of therapy made available only this year are discussed. A few well-chosen illustrations are included, and a bibliography that contains important references is given at the end of each chapter. This book will be valuable not only to the practicing physician for whom it was primarily written but also to the specialist in the field of cardiovascular diseases.

Roentgen-Diagnostics. Volumes I and II: Skeleton (Parts 1 and 2). By H. R. Schinz, W. E. Baensch, E. Friedl, and E. Uehlinger. English translation arranged and edited by James T. Case, M.D., D.M.R.E. First American edition (based on fifth German edition). Cloth. $36; $45. Pp. 868, with 1,183 illustrations; 869-2059, with 1492 illustrations and 29 charts. Grune & Stratton, Inc., 381 Fourth Ave., New York 16, 1951; 1952.

For 20 years, through four editions, the monumental *Lehrbuch der Röntgendiagnostik*, regarded by many as the outstanding textbook and reference book on radiological diagnosis in the world, has been available only in a German language edition. Now, through the efforts of Dr. James T. Case and a group of American and German radiologists, physicists, and other specialists, volumes 1 and 2 of the new edition of this work have been translated and published in English. The third volume of the American edition is now in preparation. The first two volumes cover basic roentgenographic theory, protection against x-ray exposure, x-ray diffraction studies, localization of foreign bodies,

and roentgenographic examination of the normal and the diseased skeleton, the muscles, tendons, subcutaneous tissues and vessels, and the mammary and salivary glands. This material, as it appeared in the German edition, has already been reviewed in THE JOURNAL (144:885 [Nov. 5] 1950; 146:1542 [Aug. 18] 1951. The bibliography has been expanded to include numerous references to source material of English and American origin not included in the original German language edition. The excellence of the German edition has been fully preserved in the American edition. The text is complete, authentic, and profusely illustrated with line drawings and roentgenograms of the highest quality. The volumes are beautifully printed and bound. They represent an important contribution to American radiological literature and will be of value not only to radiologists but also to internists, surgeons, pediatricians, orthopedists, urologists, and all others who employ roentgenography in diagnosis.

Recent Advances in Medicine: Clinical, Laboratory, Therapeutic. By G. E. Beaumont, M.A., D.M., F.R.C.P., Physician to Middlesex Hospital, London, and E. C. Dodds, M.V.O., D.Sc., M.D., Courtauld Professor of Biochemistry in University of London. Thirteenth edition. Cloth. $6. Pp. 397, with 59 illustrations. Blakiston Company (division of Doubleday & Company, Inc), 1012 Walnut St., Philadelphia 5, 1952.

This small, combined review volume and manual, whose popularity is indicated by the fact that it has been translated into Spanish, Italian, and Romanian, naturally cannot cover adequately all the advances that have been made in medicine since the last edition, printed five years ago. The authors have therefore selected only those advances that are of use in the diagnosis and treatment of medical patients in a general hospital. In this edition, they have added chapters on collagen diseases, antihistamines, and isotopes in medicine; discarded previously published chapters on chemotherapy, diabetes, Addison's disease, and sex hormones; revised the chapter on antibiotics to include accounts of aureomycin, chloramphenicol, streptomycin, and oxytetracycline ("terramycin"); and rewritten the biochemical chapter to discuss colorimetry, flame photometry, collection and storage of blood specimens, and methods for the determination of alkali reserve, blood oxygen, serum iron, and urinary corticoids. Additions to previous chapters include sections on cyanocobalamin (vitamin B_{12}), liver puncture biopsy, vagotomy, unipolar lead electrocardiography, cardiac catheterization, and the use of methonium salts in hypertension. Some sections, such as those on bronchography and tuberculosis, have been expanded. This book has an adequate index and an extensive bibliography; the latest references are to articles published in 1951. It contains, in condensed form, much information of value to the practicing physician.

Physiological Bases of Gynecology and Obstetrics. By S. R. M. Reynolds, M.A., Ph.D., D.Sc., Physiologist, Department of Embryology, Carnegie Institution of Washington, Washington, D. C. Publication number 128, American Lecture Series, monograph in American Lectures in Gynecology and Obstetrics. Edited by E. C. Hamblen, B.S., M.D., F.A.C.S., Professor of Endocrinology, Duke University School of Medicine, Durham, North Carolina. Cloth. $5.50. Pp. 153. Charles C Thomas, Publisher, 301-327 E. Lawrence Ave., Springfield, Ill.; Blackwell Scientific Publications, Ltd., 49 Broad St., Oxford, England; Ryerson Press, 299 Queen St., W., Toronto 2B, 1952.

This book contains a series of lectures that the author gave as part of a course presented on the postgraduate level for physicians at the Medical School of Montevideo. The lectures are almost synoptic in form, and they contain only a few references to individual workers. There is no bibliography, but a valuable supplementary reading list is at the end of the book. Among the subjects discussed are uterine physiology, cervical dilatation, abnormal labor and incoordinate uterine action, menstruation, vascular actions of steroid hormones, ovarian vasculature and ovarian function, endocrine effects of hysterectomy, physiological effects of uterine distention, uterine growth and circulation during pregnancy, fetal maturity, uterine function and uterine gradients, and physiological conditions of the uterus at the onset of labor. With the exception of the lectures on the ovarian circulation, the treatment of all of these topics is considered in detail in Reynold's monumental and classic book, "Physiology of the Uterus," (2nd edition published by Paul B. Hoeber, New York, 1949). Those who are familiar with this book know how basic and authoritative Reynold's valuable contributions in the field of physiology are. Anyone who reads the new book may look forward to a treat, because the 15 brief lectures are delightful to read as well as being informative.

Manual of Gynecology. By E. Stewart Taylor, M.D., Professor and Head of Department of Obstetrics and Gynecology, University of Colorado School of Medicine, Denver. Cloth. $4.50. Pp. 204, with 70 illustrations. Lea & Febiger, 600 S. Washington Sq., Philadelphia 6, 1952.

This book was written to provide the medical student and the general practitioner with the essentials of gynecology. The technical aspects of operative gynecology are not included, but the indications and contraindications for various types of gynecologic operations are discussed. Also, the medical, psychosomatic, and endocrine aspects of diagnosis and treatment are emphasized. The 190 pages of text are divided into 26 chapters, which very well cover the range of gynecologic subjects; however, two of the chapters, "Hydatidiform Mole and Chorionepithelioma" and "Abortion," are devoted to obstetrics. Of the illustrations included only 30 are original. At the end of each chapter there is a brief but well-selected list of references. The author has purposely presented the text material in a concise, effective form with a view toward leading the student to the literature for consultation on a particular subject when his interest is so stimulated. Unfortunately, few medical students are stimulated sufficiently to consult the literature other than textbooks. The book is very well written. It contains the essentials of gynecology in compact form, and the advice given is excellent. The illustrations are clear and instructive, but, because of its limited data, the book can serve only as a companion volume to one of the well-established textbooks of gynecology, such as those by Novak, Wharton, Crossen, and Curtis and Huffman. The book will be useful to medical students as a synopsis.

Stress: Enfermedades de adaptación, ACTH y cortisona. Por el Dr. Rodolfo Q. Pasqualini, profesor adjunto de Clínica médica de la Facultad de ciencias médicas de la Universidad de Buenos Aires. Un compendio, con fines clínicos, de la doctrina del síndrome general de adaptación, basado principalmente en "Stress," del Prof. Selye. Con un prólogo por el Prof. Dr. Hans Selye. Cloth. Pp. 618, with illustrations. Librería y editorial "El Ateneo," Florida 340—Córdoba 2099, Buenos Aires, 1952.

The preface by Dr. Selye states that this book, though based on his monograph "Stress," is by no means a mere translation; it incorporates fundamental contributions to the subject by Dr. Pasqualini and is written, moreover, from a clinician's standpoint. The first 6 chapters summarize the history and theory of the "general adaptation syndrome," and the remaining 12 take up diseases of the endocrine and cardiovascular systems, the kidneys, bones and joints, blood, respiratory organs (including asthma and other allergies), gastrointestinal system, liver, nervous system, eyes, and skin. The emphasis is on the uses of corticotropin, cortisone, and other hormones in the therapy of these disorders. The amount of information brought together here is overwhelming, being based on a bibliography of 851 references to very recent publications, most of which represent work done in the United States and Canada. The book is legibly printed, commendably free from minor flaws, and well indexed.

Biomicroscopie et histopathologie de l'œil. Vol. I: Généralités—conjonctive—cornée. Par Archimede Busacca. Texte français traduit de l'original italien par Mme R. M. Lodygensky-de Salis. Cloth. $35. Pp. 480, with 349 illustrations. Grune & Stratton, Inc., 381 Fourth Ave., New York 16; [Schweizer Druck- und Verlagshaus AG., Zurich], 1952.

This is the first volume of a truly magnificent work on the pathology of the eye as seen by microscopy in both the living organ and in sections. A large collection of beautiful plates, many in color, is accompanied by an explicit, carefully written text. The labor of translation from the original Italian into French has been well done; the translator deserves added recognition for having supplied a good alphabetical subject index. Since American students spend so large a part of their lives gaining facility in their own language, they are increasingly unwilling to learn foreign languages. This limits the usefulness of otherwise excellent foreign books in the United States. To ophthalmologists and pathologists able to read French, however, the present volume is highly recommended.

QUERIES AND MINOR NOTES

INFLUENZA VACCINE

TO THE EDITOR:—*What kind of vaccine is the Army using for immunization against influenza? What company manufactures it, for how long does it effect immunity, and what length of time is required for it to take effect?*

H. B. Martin, M.D., Harrold, S. D.

ANSWER.—The Army currently employs a polyvalent influenza virus vaccine with the following composition: PR 8 strain (type A) 22 2/9%; FM 1 strain (type A prime) 22 2/9%; Cuppett strain (type A prime) 22 2/9%; and Lee strain (type B) 33 1/3%. This vaccine is not used routinely but only in certain situations and then only after type and strain specificity have been determined. The National Institutes of Health has licensed seven commercial biological laboratories to manufacture influenza virus vaccine. They are E. R. Squibb & Sons, Pitman-Moore Company, Parke, Davis & Company, Eli Lilly & Company, National Drug Company, Sharpe & Dohme, Inc., and Lederle Laboratories Division, American Cyanamid Company. The vaccine distributed by these companies for civilian use is of the same composition as that furnished the Army. The present vaccine is believed to offer adequate protection for a relatively short time, probably only three or four months. Protective levels of immunity are achieved in the immunized person about 10 to 14 days after administration of the vaccine.

It should be noted that there is little, if any, crossing of immunity between the known major types of influenza virus; for example, a monovalent type A vaccine might offer no protection against a type A prime or a type B virus. Therefore, it is necessary to know that the virus causing a given influenza outbreak is either the same as, or is antigenically closely related to, at least one of the viruses contained in the vaccine to be employed. Otherwise the vaccine is wasted, for no protection will result. It should also be noted that influenza vaccine is effective against influenza only; it is of no value against the common cold.

DEFROSTING OF REFRIGERATORS

TO THE EDITOR:—*I am going to buy a new refrigerator and am interested in the effect of defrosting on the stability of biologicals. Which of the three available methods of defrosting is preferable: (1) the old method, (2) the automatic method in which refrigeration is shut off for about 2 hours twice in 24 hours, or (3) the automatic method in which refrigeration is shut off for about 8 minutes and defrosting is done by a heating element?*

M.D., Colorado.

ANSWER.—The preferred method of defrosting a refrigerator depends on the temperature normally maintained and the size of the refrigerator. For ordinary biologicals the temperature is generally 36 F (2.2 C). In the larger refrigerators (20 cu. ft. and larger) this is accomplished by means of a finned type coil, with one or more small fans that circulate air over the cooling coil. This type of refrigerator needs no special provision for defrosting, because the coil defrosts each time the machine stops. Smaller refrigerators (up to 16 cu. ft.) generally have the same type of cooling coil that regular domestic refrigerators have, and the cooling coil must be defrosted manually or automatically. The automatic type is preferable, and the shorter defrosting time will keep the biologicals at a more even temperature. Of the refrigerators equipped with automatic defrosting, the type requiring no personal attention is, of course, the preferred type. For biologicals that must be kept frozen, the automatic defrosting method is a necessity, and the shorter the time required for this defrosting the better the products will keep.

The answers here published have been prepared by competent authorities. They do not, however, represent the opinions of any official bodies unless specifically stated in the reply. Anonymous communications and queries on postal cards cannot be answered. Every letter must contain the writer's name and address, but these will be omitted on request.

EXCESSIVE ERECTIONS

TO THE EDITOR:—*A clergyman between the ages of 35 and 40 has excessive erections that occur during the day and that awaken him at night. He is in excellent physical condition. He has been on a nonstimulant diet and has been taking 30 grains (1.94 gm.) of potassium nitrate a day and also bromide, with little or no success. What would you suggest?*

M.D., Illinois.

ANSWER.—This patient should be examined to see if he has chronic prostatitis or seminal vesiculitis of nonspecific origin. Sometimes these infections cause hyperemia and congestion, which initiates erections. It is normal for any virile man to have nocturnal erections when the bladder becomes distended. Sedative treatment in the form of drugs is not indicated in these patients. Patients who sleep lying on the back or abdomen are more likely to have nocturnal erections. It is also advisable to have light covers on the bed when an attempt is being made to eliminate this reaction. This situation should be minimized to the patient, because it is easy to bring about a fixation that is upsetting physically, mentally, and perhaps spiritually if too much importance is assigned to this symptom.

SERORESISTANCE IN SYPHILIS

TO THE EDITOR:—*In what percentage of treated syphilitic patients do either or both flocculation and complement fixation tests continue to show positive reaction after treatment?*

M.D., Pennsylvania.

ANSWER.—Seroresistance is more common in late syphilis than in early syphilis and is directly related to the duration of the infection and the inadequacy of treatment. As time elapses after adequate treatment, more and more patients become seronegative if followed by quantitative serologic tests. An infection of many years' duration before adequate treatment will require many years thereafter to reach seronegativity. Retreatment, if previous treatment was adequate, generally does not increase the percentage of seronegativity, but a syphilitic patient may be seroresistant to one method of therapy and not to another. The greater adequacy of modern methods of treatment compared with those of a decade ago will undoubtedly tend to reduce seroresistance. A patient who is seroresistant with a flocculation test is usually also seroresistant with a complement fixation test. Apparent seroresistance after adequate therapy may be due to false positivity associated with some condition unrelated to syphilis. It is evident from these considerations that true percentages of seroresistance would be difficult to obtain.

INJECTIONS INTO BUTTOCK

TO THE EDITOR:—*The most approved site for deep intramuscular injections seems to be the inner angle of the upper outer quadrant of the buttock. What landmarks determine the location of the middle of the buttock and how far above and outside of this location in an adult should injections be given? At what angle should the needle be thrust through the skin and into the muscles?*

M.D., Florida.

ANSWER.—The buttock is usually considered as divided into four equal quadrants by two imaginary lines. The buttock area is bounded by the iliac crest, the lateral aspect of the thigh, the gluteal fold (inferior margin of gluteus maximus muscle) and the midline of the body. Injection should be made above and outside the intersection of the two lines (in the lower inner quarter of the upper outer quadrant) to avoid striking blood vessels, bone, and nerves. The needle (no. 22, 1½ to 2 in. long) should be inserted perpendicular to the skin surface while one hand presses the lower buttock firmly downward toward the thigh to flatten the tissues. This allows for deep penetration into the gluteus maximus muscle.

RECURRENCE AFTER MASTECTOMY FOR CANCER

TO THE EDITOR:—*Is vitamin E therapy of any value in a woman in the menopause who had radical mastectomy for cancer a few years ago? I am afraid to give her estrogen. What are the early signs of recurrence? She was operated on within six weeks of the time the lump was discovered. The surgeon did not cut down on it and then make frozen sections, but he went up under the breast and removed the lump, which was reported to be malignant. Fifteen days later she had radical mastectomy elsewhere, having had five deep therapy roentgen ray treatments in the interval between operations. What is the possibility that cancer cells could have been spilled in tissues at the first operation? At the second operation, she was reported to have hyperplasia of the axillary nodes; what does this indicate? Are there any tests that would indicate early recurrence or would roentgenograms show it? Is testosterone therapy indicated?* *M.D., Oklahoma.*

ANSWER.—Biopsy of a breast tumor prior to radical mastectomy may carry with it a slight risk of dissipation of tumor cells through lymphatic or venous channels and may give rise to the possibility of implantation of tumor cells in the wound, but the risk is a necessary one for the proper management of these cases. It is well to reduce the time interval between biopsy and radical mastectomy to a minimum. A report of hyperplasia of the axillary lymph glands is of no significance, except that in some instances serial section of these glands will show small tumor deposits. The likelihood of recurrence, after radical mastectomy, is approximately 20 to 30% if axillary glands are not involved and 60 to 75% if axillary glands are involved. Laboratory tests and roentgenographic studies are of no particular value in detecting early recurrences. Attention to the patient's complaints and examination of the scar, opposite breast, axillas, cervical lymph nodes, lungs, and liver will yield better results. An increased sedimentation rate is often seen in bony metastasis, and the sulfobromophthalein (bromsulphalein®) sodium retention and alkaline phosphatase tests are fairly sensitive tests for liver metastasis. Hormone therapy, as a prophylactic measure after radical mastectomy, has shown little promise in most physicians' experience. Vitamin E therapy should do no harm but has no obvious purpose.

RETROGRADE EJACULATION FOLLOWING TRANSURETHRAL RESECTION

TO THE EDITOR:—*A man, aged 41, was operated on a year ago for a congenital bladder neck obstruction (hypertrophy). A transurethal resection was done, and was followed by two dilatations. The patient is otherwise physically normal. Urinary symptoms have largely disappeared since the operation. On resumption of intercourse, the patient noted retrograde ejaculation, and since that time, no semblance of normal emission has occurred. A urologist was able to massage a small amount of prostatic material through the anterior urethra and after ejaculation on another occasion found a few dead sperm in a total specimen of centrifuged urine. Is there hope for correction of this condition to provide means for further pregnancy? The patient undergoes constant psychological trauma because he has no satisfactory climax to his sexual experiences. He was adjudged psychiatrically well adjusted by a competent man.* *Julius Amsterdam, M.D., Philadelphia.*

ANSWER.—Transurethral resection of the prostate gland is followed by "internal ejaculation" in from 40 to 60% of the patients. Nothing can be done to rectify this situation after the prostate has been resected. It is always wise for the surgeon to explain this to the patient who is in the age of fertility, because he must take the calculated risk of this complication when he enters into the procedure of transurethral resection. Sometimes after a period of months or even several years there is some external ejaculation in these patients. Since this patient is 41 years of age, his chances of impregnating his mate by ordinary intercourse are not good. If it is explained to the patient that sexual activity is in no way interfered with by retrograde ejaculation and that this condition occurs in 50% of the patients who have had this type of operation, he should be able to adjust himself psychically to it.

SALICYLATES AND BENEDICT'S TEST

TO THE EDITOR:—*Is it true that in treating a diabetic with sodium salicylate Benedict's test may give a positive reaction when sugar is not present in the urine? This is important because if insulin were increased a severe reaction might occur.*

M.D., Maine.

ANSWER.—The urine of patients taking salicylates may give a slightly positive reaction with Benedict's solution. Fortunately the test is usually not strongly positive and so does not often lead to confusion or to an erroneously high insulin dosage. Nevertheless, the correspondent is correct in calling attention to the matter, and certainly both patients and physicians should bear in mind the possibility.

In this connection it must be remembered that the urine of persons taking salicylates may give a reaction with ferric chloride that resembles somewhat that of diacetic acid. There have been instances of salicylate intoxication in which the symptoms were thought due to diabetic acidosis because of the finding of what was thought to be a positive ferric chloride test together with some sugar in the urine.

To differentiate with ferric chloride a color due to salicylates from that due to diacetic acid one boils the mixture of ferric chloride and urine. Since diacetic acid is volatile, any color given by it will disappear, whereas that produced by salicylates will not change. Furthermore, acetone and diacetic acid give a positive nitroprusside test whereas salicylates do not.

ANKLE SWELLING

TO THE EDITOR:—*Severe edema of both ankles developed in a 47-year-old woman three years ago on a trip to Florida. Since then her ankles swell whenever she is exposed to heat, whether Michigan summer or Florida winter. Her general health is excellent and complete examinations show no abnormality of heart or kidneys. She has no history of allergy. Have you any suggestions?* *Eleanor M. Gillespie, M.D., Sturgis, Mich.*

ANSWER.—The commonest cause of edema of both ankles is local circulatory fault and not disease of heart or kidneys. A survey done some years ago at the Massachusetts General Hospital showed that only 10% of ambulatory patients coming to the outpatient clinic with edema of both ankles had heart disease as the responsible cause. The great majority had either overweight, varicose veins, or phlebothrombosis. A few had kidney disease or other causes for the edema. Normal persons who stand or sit for considerable periods of time are prone to slight swelling of the ankles, especially if they are overweight and especially in hot weather. Also, in the case of women, there is a tendency to more swelling at the time of catamenia. Severe edema, however, is not likely to be the result of such factors as obesity and heat alone. It seems probable that some deficiency of the circulation, especially the venous circulation, has been responsible, and it would seem desirable to investigate this matter further in the case cited.

PAIN IN LEGS

TO THE EDITOR:—*A man, 40 years of age, has coronary heart disease for which he has been hospitalized several times. He also has spastic peripheral vascular disease for which he had a bilateral lumbar sympathectomy done one month ago. He still has excruciating pain in both legs and has been given 5 mg. doses of 3-hydroxy-N-methylmorphinan (dromoran®) hydrobromide hypodermically each night for the pain. Am I justified in prescribing this drug as long as he has pain? Neither the surgeon nor the patient's previous physician will subscribe to it. The patient claims his pain is so bad he would subject himself to amputation of both legs if the pain would be relieved. All other sedatives have been tried, with no relief.*

R. M. Colton, M.D., North Tonawanda, N. Y.

ANSWER.—There is a possibility that this patient has already acquired drug addiction. It would seem wise to recommend hospitalization for careful study of the degree of vascular disease and the best therapy possible for both vascular disease and addiction.

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RESPIRATORY INFECTION IN CHILDREN

TO THE EDITOR:—*In the office treatment of upper respiratory tract infection in children, I have been struck by the frequency of recurrence of symptoms following four to six days of intensive therapy (30 to 50 mg. per kilogram of body weight per day) with the newer antibiotics. I have gained the impression that the older regimens of sulfonamides or penicillin were more effective in suppressing infection for extended periods. It is also my impression that the new drugs are primarily bacteriostatic rather than bactericidal, as are penicillin, the sulfonamides, and streptomycin. Have you any data that would refute or support the above observations? I dislike giving injections to children, especially if there is a safer, more reliable way to treat the disease in question.*

M.D., Washington.

ANSWER.—Sulfonamides and the antibiotics may exercise either a bactericidal or bacteriostatic effect on infecting microorganisms. Which effect is achieved depends on the sensitivity of the infectious agent to the particular drug being used and on the concentration of the therapeutic agent in the body fluids. As a rule, it may be said that in most instances of infection, with the doses of these therapeutic agents currently being prescribed, the sulfonamide or antibiotic will exercise a bacteriostatic effect on the invading microorganism. It would appear that penicillin, when administered parenterally in accepted doses, has a bactericidal effect in vivo on certain strains of beta hemolytic streptococci and gonococci that are acting as infectious agents. Current evidence seems to indicate that, in general, the so-called broad spectrum antibiotics administered orally in the recommended doses for the recommended lengths of time produce the same results in infections susceptible to their antibacterial action as does penicillin injected parenterally.

ACUTE INFANTILE ECZEMA

TO THE EDITOR:—*A well-nourished male infant, 1 year old, has had acute infantile eczema since birth. A pediatrician placed him on a milk substitute (nutramigen®) and prescribed application of boric acid packs and soothing ointments. This gave relief for a few days, but the acute weeping phase recurred. An allergist did many skin tests but found no evidence of allergy. The child was given diphenhydramine (benadryl®) hydrochloride, and wet packs and soothing ointments were applied. This gave little relief. Then a dermatologist instituted sedation with phenobarbital, and potassium permanganate wet packs, silver nitrate packs, ichthammol (ichthyol®), and mild coal tar ointments were applied. While in the hospital the child made good progress, but as soon as he was brought home the acute weeping phase again developed. I would appreciate advice on how to bring this acute phase under control.*

A. C. Wubbena, M.D., Rock Rapids, Iowa.

ANSWER.—In a summary of the subject, Hill recently stated that no one really understands infantile eczema and that there is no treatment that is consistently satisfactory. Coming from a pediatrician-allergist, such comments carry deep significance. Nevertheless, an attempt must be made, and, with intelligent cooperation from the mother, something usually can be done to get the eczema under control. First, if possible, the eczema should be classified, because infants may have either atopic, contact, seborrheic, or infectious eczematoid dermatitis, eczema-like infections, or bizarre eczematous eruptions that defy classification. The fact that the eczema improves during hospitalization and flares again at home suggests that something in the home environment may be a causative factor.

When the eczema is acute, the infant should be removed from the home, preferably to a hospital, and treated topically with colloid baths, the application to acute areas of cool wet dressings of aluminum subacetate solution, 0.5%, or boric acid solution and to subacute areas of a bland ointment, such as one containing equal parts of zinc oxide (Lassar's) paste and petrolatum or equal parts of petrolatum and unscented cold cream. In the meantime, every attempt should be made by repeated, pointed history-taking to uncover a clue to the cause. When the acute phase subsides, 2% ichthammol ointment can replace the wet dressings. Consideration should again be given to performance of skin tests, for, while they usually furnish little information of practical value, if carefully done and intelligently interpreted, they might lead to a clue. Hill recommends a diet containing relatively few foods: partly skimmed milk, with the addition of three or four tablespoons of calcium caseinate to the quart, oats or rice, string beans, carrots and squash, ripe banana, prune pulp, apple sauce, multivitamin preparation, and ascorbic acid. When the infant has improved sufficiently to leave the hospital, he should be taken, if possible, to the home of a relative and exposed to only one of his parents for a few days, then to the other, provided there has been no flare-up of the eczema. Later, if the child continues to improve, he can be brought home and confined to one room for a while and then allowed into other rooms successively. Such a step-by-step procedure, though extremely difficult to carry out, might uncover a useful clue and make the effort worthwhile. With caution, additional foods may be introduced into the diet, and new articles of clothing may be added, bearing in mind that the infant's "constitutional idiosyncrasy" has not been changed, only the exciting irritants. Ordinarily, epinephrine is not used in such cases. Medicated wet dressings are most useful, for they have a soothing, astringent, cleansing effect. Water itself, without the addition of aluminum subacetate, boric acid, or potassium permanganate might be irritating to the skin.

EPIDERMOLYSIS BULLOSA

TO THE EDITOR:—*A 9½-year-old white boy has epidermolysis bullosa hereditaria. The bullae that have occurred following the slightest trauma have over a period of years gradually produced superficial contraction in the process of their healing. This is especially noticeable in the hands and fingers. There is a marked brittleness of the bones that has resulted in 11 fractures in the past five years. I have been unable to answer the parents' questions about prognosis, the outlook on his education and earning capacity (he has a very high intelligence quotient), and whether any of the newer preparations would be of value.*

M.D., Oklahoma.

ANSWER.—There are two types of epidermolysis bullosa: the simple or mild type, and the dystrophic or severe type. In the mild type, little scarring or disfiguration results after formation of the blisters, while in the dystrophic form, the degree of scarring is apt to be severe, even to the point of limiting the function of an area involved. In the mild type, the patient often outgrows the disease, while in the dystrophic type such an occurrence is rare. The child's education may follow the normal and desired course, care being taken to prepare him for an occupation in which trauma to his extremities, either from the use of the hands or from standing or walking, is not necessary. There has been no medicament, new or old, that has been found to be of value in this condition.

DUODENAL ULCER

TO THE EDITOR:—*Is there any connection between duodenal ulcer, hyperacidity, a low blood sugar level, and the action of antispasmodics, such as atropine and methantheline bromide (banthine®)?*

M.D., Illinois.

ANSWER.—There is a definite relationship between hyperacidity and duodenal ulcer. The average volume of the 12 hour night secretion for patients with duodenal ulcer is 1,000 cc. as compared to 581 cc. for normal persons. The average normal output of acid during this period is about 650 mg. as compared to 2,224 mg. for patients with duodenal ulcer. In addition, the secretion of acid in patients with duodenal ulcer is continuous, while in normal persons it is intermittent. There is no relationship between blood sugar levels and duodenal ulcer. There is no evidence that indicates that patients with duodenal ulcer have a low blood sugar level. On the contrary, diabetes and duodenal ulcer can occur in the same person.

Many of the antispasmodics that are on the market today do not consistently decrease the acid secretion. Atropine, methantheline bromide (banthine®), and diphenmethanil ("prantal") methylsulfate effectively decrease acid secretion in about one-third of the patients to whom they are administered. When they

are used, they should not be given as the sole medicament but should be used in conjunction with an effective antacid. They are given in order to decrease the emptying time of the stomach, thus prolonging the local action of the antacid.

ALLERGY TO INSULIN

To the Editor:—*A woman, aged 57, has had severe diabetes mellitus for the last 10 years. Even with a strict diet, containing 1,300 to 1,400 calories, the blood sugar level varies between 185 to 250 mg. per 100 cc. and the urine sugar from 4 to 7%. The patient is allergic to all types of insulin. About seven years ago she was hospitalized for attempted desensitization, which failed. Is there any treatment that can be given to this patient so she can take insulin without having a severe reaction?*

M.D., New York.

Answer.—Patients with severe allergy to insulin can usually be desensitized to insulin. This may be accomplished by the frequent injection at intervals as short as every 30 minutes of minute doses of regular (unmodified) insulin or crystalline zinc insulin. Thus, the process may be started with a dose of 0.0001 unit, the dose being doubled every 30 minutes and injections continued throughout the day. In some cases it is necessary to continue the injections throughout the night to prevent the loss during the night of what has been gained during the day. The frequency of injections during the night may be reduced to once every one or two hours. Usually, within two or three days the patient will reach a stage at which 0.5 unit or 1 unit may be given four or five times in 24 hours. Within a week, such patients usually can attain tolerance for moderate doses of insulin taken once or twice in 24 hours.

PAINFUL BLIND EYES

To the Editor:—*What is your opinion on retrobulbar injection of alcohol in painful blind eyes? As far as I have been able to determine this procedure has not produced good results except when used as a temporary measure and in patients who are unable to be surgically treated at the time this procedure is done.*

M.D., West Virginia.

Answer.—Tumors occur so commonly in painful blind eyes that the treatment of choice is always enucleation; however, the injection of alcohol immediately behind the eye is an unusually useful procedure for the relief of intractable ocular pain, especially in conditions in which the pain is secondary to a disease for which there is effective therapy. Maumenee (Retrobulbar Alcohol Injection: Relief of Ocular Pain in Eyes with and Without Vision, *Am. J. Ophth.* **32**:1502, 1949) reported in detail the results of retrobulbar alcohol injection in a series of 56 eyes. In 41 eyes with less than 10/200 vision, pain was controlled in 35 for at least one month; 15 of the 41 were subsequently enucleated. Generally, he found that retrobulbar alcohol injection controlled pain for one to three months but that the pain returns when the nerves regenerate if the primary cause of pain is not remedied. In 15 patients with vision between 10/200 and 20/20, alcohol injection caused no permanent complication or diminution of vision.

HEMOPHILIA

To the Editor:—*A patient who has two sons, aged 16 and 12, who are afflicted with hemophilia has inquired about a histamine treatment that was tried on some children in Chicago with beneficial results. I would be grateful if I could obtain information about this treatment.*

J. A. Avrack, M.D., New York

Answer.—An article on the treatment of hemophilia, "Further Studies on the Influence of Histamine on Platelet Activity," by Sanford, Hall, and Butler was published in *Pediatrics* (**9**:212, 1952). The histamine treatment is also described in "The Child in Health and Disease" (Grulee and Ely, ed. 2, Baltimore, Williams & Wilkins, 1952, p. 549). Regardless of the age or weight of the patient, 0.1 mg. of histamine is given the first day, 0.2 mg. the second, 0.4 mg. the third, 0.8 mg. the fourth, and 1 mg. the fifth. The dose is not increased above 1 mg. even in a longer series. By intravenous injection the histamine is given in 250 cc. of isotonic sodium chloride solution at a rate of 20 drops per minute. By hypodermoclysis the same quantity is given at the rate of 10 drops per minute. The action of the histamine is not permanent and tends to become less efficient as more injections are given. It is sufficient, however, to cause a cessation of bleeding and to decrease the coagulation time of the blood to its usual value for the particular patient in the majority of instances.

OSTEOGENESIS IMPERFECTA AND ABORTION

To the Editor:—*I attend a family in which there is a normal 17-year-old boy, a 13-year-old boy with osteogenesis imperfecta, with a history of 10 fractures, mostly of the femur, a 9-year-old normal girl, and a 6-year-old girl with osteogenesis imperfecta, with a history of 7 fractures. The 13-year-old boy and the 6-year-old girl are in plaster casts from the chest to the toes of one foot. There is no known history of the disease in the paternal or maternal ancestors. The parents' reactions to serological tests for syphilis are negative, and the mother is Rh-negative. The mother is two months pregnant. Would a therapeutic abortion be legally justified if both husband and wife desire it?*

K. W. Taylor, M.D., Pickerington, Ohio.

This inquiry was referred to two consultants, whose respective replies follow.—Ed.

Answer.—From a medical standpoint, it cannot be predicted with any certainty whether the osteogenesis imperfecta will affect another child. Accordingly, this condition does not seem to justify therapeutic abortion. The legality of such procedures in the state of Ohio may be determined by consultation with a lawyer in that state.

Answer.—Undoubtedly, this patient has a Mendelian dominant genetic factor responsible for the occurrence of osteogenesis imperfecta in two children. It can be assumed that at least half the offspring will be affected. No one can be certain whether the current pregnancy will result in a normal baby or one with osteogenesis imperfecta. Is it justifiable to destroy this embryo because it has at least a 50% chance of inheriting a serious disease for which there is no cure at the present time? This question would be answered differently by different authorities. There are the additional factors of psychic trauma to the mother resulting from the uncertainty and anxiety concerning the outcome of this pregnancy as well as the likelihood of physical, emotional, and economic strain in raising a third cripple. The physician and his consultant must evaluate these several considerations in arriving at a decision. One thing is certain—if it is decided that this pregnancy should be terminated, the surgical procedure should include a positive means to prevent another pregnancy.

INTRACEREBRAL CALCIFICATION

To the Editor:—*What is the pathogenesis of intracerebral calcification involving the falx cerebri and scattered irregularly throughout the brain substance, as seen roentgenographically? There is no known history of trauma, and tests for syphilis, histoplasmosis, and parathyroid tumor are negative. The patient is a Negress, aged 26, with clinical episodes suggestive but not typical of grand mal seizures.*

David A. Newman, M.D., West Palm Beach, Fla.

Answer.—Calcification of the falx cerebri is so common and so unrelated to any clinical manifestations as to be almost normal. Calcification scattered throughout the brain substance is commonly associated with convulsive seizures. One of the commoner causes is toxoplasmosis, and in such cases there is often an associated chorioretinitis. Calcification in the brain may also arise as the result of tumors, but in such cases it would not be expected to be scattered throughout the brain substance. Vascular anomalies may also be associated with calcification, but these are usually localized. In some instances, the cause of calcification has not been demonstrable. Syphilis and histoplasmosis are rarely, if ever, responsible for intracerebral calcifications, whereas parathyroid tumors have been found in association with calcification in the basal ganglions.